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Interstitial Electro-Chemical Decomposition and Medication.

The title—Interstitial Electro-Chemical Decomposition and Medication—occurred to me as the most fitting and intelligible expression of that peculiar phase of electro-therapeutics to which I have given the closest possible attention for several years, and with which I have had some practical experience within the last two years.

However, I would not by this imply originality of conception for what I present, except possibly a few practical hints as to the methods of application and observation of phenomena. My argument for undertaking this subject is its growing importance, and the advantages it offers to the profession, if applied with that discrimination and intelligence which characterize our use of other therapeutic measures. This importance is now becoming so great that the progressive practitioner cannot afford to to be indifferent thereto, nor to estimate its possibilities with a sneer.

Neither is the fact that every physician has discarded from one to twenty batteries any evidence that electricity is unworthy the place it seeks in practical therapeutics, but is rather monumental proof of the abuse with which ignorance rewards misunderstood or misapplied merit. With equal justice may the empirical herb-vender condemn the entire mineral and metallic materia medica. It is one of the most natural acts of human nature to distrust the intangible force whose very existence and properties must be interpreted, alone, from its tangible effects. My anxiety and effort, therefore, shall be to present only such claims for the constant current as have been positively demonstrated, and may be utilized by anyone who will devote some time, study, and expense to this hidden power, which yields either good or ill, according as it is judiciously or illy employed.

Electro-therapy is a field of necessary specialization, within which, if we seek specific results, we must restrict our observations closely to a specific subdivision, where all terms must be clearly defined and all phenomena carefully observed and rationally interpreted. In view of these conditions, I shall confine myself to the behavior of the constant galvanic current, acting locally on certain tissues of the body, not attempting to follow out the general physical effects, but directing attention rather to interstitial changes—solution, decomposition, recomposition, propulsion, diffusion, etc.; that is, to chemical actions and reactions. However much electro-therapic empiricism may have accomplished, it does not claim to have evolved a complete electro-therapic science. Yet through its rational and well-directed efforts many facts have been established; and these facts afford substantial premises for both the induction and deduction of still greater results.

The following elementary, though none the less important, principles are now quite universally accepted:

1. The constant current has definite chemical properties upon which the changes in tissues under its influence largely depend, and to which all molecular changes are primarily due.

2. The local effects depend primarily upon the polarity of the current; and secondly, upon the character and condition of the tissues and the position and composition of the electrodes.

3. Oxygen and acids develop about the positive pole, or anode; and hydrogen and alkalies about the negative pole, or cathode.

4. The anode is desiccating, hemostatic, and, in moderate strength, sedative, protective, constrictive, and propulsive. The negative pole is liquifying, solvent, decomposing, irritating, and relaxing.

These properties do not belong exclusively to the respective poles as here associated, but, other things equal, they may serve as distinguishing phenomena of polar action.

While paraphernalia and *technique*—even to the veriest detail—are all-important in electric application, we must leave the consideration of such matters to electro-physics and electro-physiology, only expressing the sincere hope that the leading investigators in this new department of electro-therapy may soon establish such uniformity of *technique* as will guarantee uniformity of method, of application, and of result. And we should be encouraged by the fact that already sufficient knowledge of the importance and functions of these auxiliaries has been accumulated to not only justify a graduated, systematic arrangement, but to warrant an official standard. The report of the committee on standard electrodes at the meetings of the American Electro-Therapeutic Association, at Chicago in 1893, and at New York in 1894, and the urgency of the recommendations, are fair indications of the importance of this essential matter, as estimated by those in the best position to appreciate our needs.

A uniform standard is one of the rational means by which the profession must redeem a great power from the abuses and perversions of quackery and charlatanism. So long as the physical, physiological, and chemical laboratories of electricity remain a mystery, its application being looked upon as a sort of cunning jugglery, its literature classified as a species of modern mythology, and its devotees styled deluded sophists, just so long may we expect electro-therapeutics to suffer the stigma of alchemy. In a word, we must know electro-materiæ before we can hope to intelligently, or even successfully, practise electro-therapy.

The experiments of Davy, DuBois-Raymond, Martin, and others show that "wherever a constant current, capable of being measured, is conveyed through the body and utilizes for its progress the component fluids of the body, there must of necessity be disruption of such fluids at each and every point where such fluids are separated by a partition wall of greater or less conductivity than the fluids themselves."

Electrically, then, we may consider the human body to be made up of heterogeneous organic tissues. These tissues, though they lie in juxtaposition, differ widely in nature and consistency, and in all those characteristics which modify resistance to the galvanic current; some are dense, firm, fibrous, while others are soft, cellular, uniform, and semi-solid. Permeating these structures and filling the interstices, we find a saline liquid which serves both as solvent and carrier of the chemical elements essential to tissue digestion, nutrition, and disintegration. This fluid is sufficiently homogeneous to constitute a fairly good electrolyte, or conductor, throughout the body. If this homogenity were not interrupted by interposition of tissues of varying consistencies, a constant current of considerable degree — of even a great intensity — could traverse the body almost with impunity, or with but slight disturbance of the chemical elements in its route.

The reason for this is apparent in one of the commonest phenomena of constant current transmission, viz.: the behavior of the current on meeting resistance. This resistance deflects its course, or increases its intensity; or, if you please, piles up electric energy to a sufficient degree to overcome the resistance offered.

If the protective affinity of the chemical elements in the electrolyte—the fluids of the body—offers greater resistance than that of the interposed tissue—be that tissue muscular, fibrous, cicatricial, or what it may, the accumulated energy attacks the tissues, and the free elements of the electrolyte are but little disturbed. Conversely, if the tissue resistance be the greater, the elements suffer modification or disintegration. The molecules are separated into their ions, to form new combinations, or to return to their original relations, after cessation of the current.

The foregoing is but a crude, condensed statement of some of the primary conditions and processes of electric metabolism as experimentally demonstrated and therapeutically confirmed. It attempts no advocacy of the theories, however plausible, of the secondary or more remote processes and phenomena which the present system of investigation will, I believe, soon verify. Whether these ideas could matriculate as scientific, may be doubted. Perhaps not; at least, not without many conditions for future investigation to work off. Yet, in this crudity, we define some well crystalized facts. Here, at least, is a safe working basis, which enables us to push onward from the known toward the undefined or undemonstrated.

It is as yet but little more than shrewd conjecture, whether healthy or diseased tissues are the more susceptible to current action, that is, whether normal living cells, in an electrolyte traversed by a constant current, are as easily separated into their ions as are pathological cells, or cells under abnormal conditions. We do know, however: (1) That normal cellular activity may be increased by mild currents. (2) That abnormal cellular activity may be arrested by medium to strong currents. (3) That even normal cellular activity may be suspended by the stronger continuous currents.

These several phenomena, which I have noted in a number of cases, and which were placed beyond question by the experiments of Herdman, Bleyer, and Weill, have doubtless fallen within the observation of such of you as have studied the action and effects of the galvanic current under the different conditions here mentioned. The increase in tone, size, and power of muscles, under the systematic application of the constant current, is a matter of common remark among electro-therapeutists, as is also the arrest of neoplastic growths under the influence of stronger currents.

The preponderance of evidence thus far accumulated, favors the probability: (1) That the normal cell, *per se* is stimulated and sustained by a mild current. (2) That it is neutralized or destroyed by very strong currents. (3) That over-action is reduced by the sedation of the positive pole, as in acute inflammatory processes and extreme nervous irritability. (4) That cells intrinsically normal, but disabled by environment, are liberated from such imprisonment, as in cicatricial and exudative tissues, by the solvent power of the negative pole.

To what extent these and all other interstitial processes depend upon the ozonizing power of the constant current acting upon the blood, experiments have not yet determined. The theory of Schienbein, however, that neutral oxygen is changed to ozone; that is, that it is polarized before it enters into organic or inorganic combination in the animal economy, is now quite generally conceded. Recent investigations—to quote Bleyer and Weill—show that "There can be no doubt that the galvanic current applied to the human body, whatever else its action may be, increases the amount of ozone both in the corpuscle and plasma."

These demonstrated evidences justify the conclusion that the constant current operates, under proper conditions, as an important adjunct to the so-called animal electricity in the body, in inciting and performing the triune process of tissue change—"Affinity, chemic action, and polarization." As this tangent, pursued, falls more and more outside the limits of special interstitial change, and leads into still deeper abstractions, the limitations of my subject forbid further pursuit of ozone in this direction, at this time.

Consideration of the foregoing with other data, persuaded me that the constant current, with even such *technique* as the general practitioner in the country can command, possesses much therapeutic power in properly selected cases. I have employed this agent in various morbid conditions, especially within the two years last past, discriminating and adapting treatment to cases, as closely as possible. I shall now briefly report a few cases, with the history, treatment, and result of each:

CASE I.—B. M. Y——, aged 30, single, first seen December 4, 1893. Paresis and slight atrophy of muscles of right side, sequel to attack of anterior poliomyelitis in early childhood. Otherwise, health fair and nothing significant in history or appearance, except goitre of three years' standing and two-thirds the size of a small hen egg, involving the right lobe of the thyroid gland. *Subjective symptoms:* Soreness, stiffness in neck, and some difficulty in swallowing. *Treatment:* Systemic tonic, and constant current every 3 to 6 days, with small sponge, negative electrode, stabile over tumor, and 4x5 cotton covered positive electrode, labile over cervical and upper dorsal regions. *Séance*, 15 minutes; strength of current, 12 to 15 m.a., with 40 Leclanché's cells. Treatment was very irregular, owing to patient's being absent from town most of the time; but my notes state that the tumor had entirely disappeared, and that patient was dismissed much improved in general health, on January 17th, 1894—six weeks after first treatment.

While this result was, on the whole, satisfactory, I should now, in such a case, replace the small sponge negative electrode by an insulated steel needle thrust into the body of the tumor, and place a small positive electrode on the surface of tumor, for the double purpose of concentrating the current and shortening the tissue circuit; thus, I believe, accomplishing the decomposition, liquefaction, stimulation, and absorption much more rapidly. The chronic nervous depravity of this particular patient, however, stands as a caution against heroic impressions.

CASE II.—M. D——, age 45; history and general health, good; consulted Dr. Ward and myself August 5, 1894, about a tumor on his neck. This had been growing about 5 months and was the size of a walnut, symmetrical, movable, slightly elastic, and situated on the posterior aspect of the neck, 1 inch to the left of the cervical spine, and at a point constantly pressed on by his collar. Within the last 5 or 6 weeks it had grown rapidly and was frequently painful. We diagnosed a cystic tumor, and advised excision. As patient could not submit to operative treatment for some time, yet was anxious to apply something for relief, we suggested the galvanic current, to which he readily agreed. We applied 12 m.a., with 30 cells; *séance*, 15 minutes, using a small zinc disc, as a positive pole, to the surface of the tumor, and a small moistened sponge in the hand as a negative electrode. The application reddened the skin sharply and caused some burning; but the most marked effect was the considerable degree of softening and depression of the tumor. By August 11th, 6 days after first application, the tumor had decreased one-half and all symptoms had correspondingly abated. Encouraged by this result, galvanism was applied, on August 11th, and August 18th, in the same manner as at first, except, with reversal of poles. The tumor rapidly disappeared and has not returned.

Although the use of the zinc disc as an electrode, in this case, was merely incidental, the question has since arisen in my mind, in connection with the study of metallic electrolysis, whether the decomposition and diffusion of the zinc may have aided in the disappearance of the tumor.

Since the above was noted. I have, on more than one occasion, reduced similar cystic growths, at one sitting, by piercing the tumor with a steel needle, attached to the positive pole when there was no cosmetic objection, or the negative pole when necessary to avoid disfiguring the surface. I have noticed that, all conditions being equal, the reduction was rather the more rapid when the electrolytic needle was positive.

The most rapid method, where practicable, is to introduce both polar needles into the growth; as this facilitates both physical and chemical change, and by occasional slight movement of the needles, allows the free escape of both oxygen and hydrogen gases, as well as of the liquid products of disintegration and decomposition.

One peculiarity, though by no means confined to this variety of tumors, has frequently impressed me as an important electrolytic fact. It is that under the influence of the same amperage and pressure the galvanic current becomes more painful to the skin in proportion as the consistency of the morbid growth changes; that is, as it becomes softer. This seems to be especially true when the negative pole is the active electrode.

If this be a constant phenomenon, and I know of no exceptions, it must find its nascency in the new conditions present either in the primary or secondary changes in the tissues induced by the current. According to the present theories of polarity and of the effects of varying resistances, the explanation of this phenomenon is that, with the liquefaction of the neoplastic substance, the current passes more freely through the subcutaneous portions and reaches the skin—which is the poorer conductor and the chemically unchanged structure—with correspondingly increased density and accumulated energy.

Concurrently with this inter-polar liquefaction, if we consider a *physical* property of the current—that of impelling moisture and ions from the positive toward the negative pole—we find in this complementary action a further explanation of this intensified impression at the cathode and of other equally important phenomena, to which we cannot now refer.

CASE III.—Submitted for treatment by the kindness of Dr. Beebe, of Woodland, March 25, 1895. Ah Coy, Chinaman, age 37; health and family history good, except that 5 years ago he noticed a hazelnut-sized, hard, smooth, movable tumor between the angle of the jaw and the lobe of the left ear—never painful nor tender. This gradually increased in size until now it is two-thirds the size of a goose egg; it extends to the zygoma; partially closes the left eye; expands the left nostril, and draws the left angle of the mouth one-half inch upward to the left and internally; it fills the left naso-pharyngeal space; obscures the left tonsil, impinging against the uvula, and transforms the arch and vault of the soft and hard palates into a hard convex body, covered with hyperemic mucosa. The tumor is slightly movable, and not adherent to the skin; circumference, over center of tumor, 16½ inches. *Diagnosis:* Fibroma, or fibro-sarcoma. In this connection, I desire to state that, aside from the relief sought for this particular Chinese sufferer, I felt anxious to test the efficacy of this method of treatment, for similar neoplasms so situated as to forbid removal *en masse* by any treatment. Besides, this plan can be pursued without even temporarily incapacitating the patient; often an important desideratum. *Treatment:* March 25—Constant current, with steel needle, negative, plunged 1 inch into lower posterior quadrant of tumor; positive pole, a 2 by 5 lead electrode over lower cervical vertebræ. Strength of current, 40 m.a. from 40 Leclanché cells. *Séance*, 15 minutes; interrupted twice to change position of point of needle. Treatment suspended 1 minute on account of dizziness. *Effects:* Profuse salivation; burning and soreness at point of entrance of needle. March 30—No change in tumor, but patient feels better. *Treatment:* Same as before, except with negative needle 1⅛-inch in upper posterior quadrant of tumor, penetrating a marble-sized gland just beneath skin. *Symptoms attending treatment:* Salivation and moderate surface burning. April 5—Patient has felt some soreness; the small superficial tumor is entirely destroyed; skin wrinkled over surface; tumor receding from soft palate; consistency, softer. *Treatment:* Negative needle 1¼-inch into lower anterior quadrant of tumor; positive pole; small sponge on surface of tumor. Strength, 65 m.a. from 46 cells. *Séance*, 15 minutes. Position of needle-point changed every 5 minutes. *Effects:* No dizziness; marked redness of surface; severe burning and copious salivation. Continuous escape of gas around needle. Marked softening of tumor. Cellular crepitus about needle. Sero-sanguineous discharge from puncture point for several days after treatment. Three days after last treatment circumference of neck 15 inches; tumor still softer, and perceptibly less prominent in naso-pharynx; surface, red and tender, with continuous sero-sanguineous discharge from needle puncture. Unfortunately, at this stage of the treatment, innate superstition and external cousinly influence removed this patient from me to a "China doctor," who, according to my Chinese informer, "cut the sick lump open and found it soft and lotten inside."

I regret, exceedingly, that I was not able to pursue the treatment in this case, as, in my judgment, it was responding favorably, with promise of marked reduction in the size of the tumor, if not of cure. Evidently the processes of resolution were already fairly well established with free external discharge of the products of disorganization and liquefaction. And this discharge I hoped to maintain and increase, by introducing both positive and negative needles into the growth at subsequent *séances*.

The action of this treatment in such cases is, I believe, a dual one. The reassimilable elements, being freed from pathological embarrassment, are absorbed more rapidly under the vigorous stimulation of the current, while all effete matter is carried off in the discharge. In tumors reduced by electro-chemical action, *without suppuration*, and *without external discharge*, electrolysis carries the disorganization to the stage of granular decomposition, and leaves nature single-handed to reorganize the elements and remove the debris by absorption.

But this electro-natural coöperation is practicable only so long as there is *no suppuration.* The presence of pus *without free exit* stands, to me, as a contradiction of interstitial electrization; as it is sufficiently demonstrated that confined tissue degeneration, once set up, is hastened by the action of the current.

In my own experience, not long since, negative electrolysis, with a pure copper electrode, in a case of chronic hydrocele, caused considerable embarrassment, by precipitating the necessity for radical treatment. In this case there were no inflammatory symptoms at the time of electrical treatment; the evacuated fluid was clear, and the microscope revealed but very few pus cells. Yet, 8 days after the treatment, the scrotum was as large as an infant's head, contained 16 ounces of foul, purulent matter, and presented all the signs of active inflammation.

I confess that two questions are pertinent here: (1) Might not profuse suppuration have developed if no electrical treatment had been used? (2) Might not septic matter have been introduced at the time of electrical treatment? To both these questions we must answer, yes, possibly. But it is hardly probable that this process, even though infection had been introduced, could have developed so suddenly and progressed so rapidly, without stimulation, and such stimulation as the current afforded. I had evacuated this same case many times before. and there had never been any reaction. In fact, the toleration of treatment showed unusual tissue indifference.

I desire, emphatically, to insist upon rigid asepsis in all galvanic applications, whether made interstitially, or to attackable surfaces.

CASE IV.—F. B——, age 19; family history, good, except chronic nasal catarrh, aggravated, if not induced, by a conical spur springing from the septum and impinging against the left inferior turbinated bone, in which it maintains constant hyperemia. Following the suggestion of Dr. Bellinger, of Chicago,[1] I decided to try interstitial electric decomposition, with the double purpose of relieving my patient, and of observing the behavior of cartilaginous tissue under the effect of the current. September 19—After 10 minutes' impression by a 10 per cent. cocain solution, I passed a steel needle through the spur at the junction of the lower with the middle third, made this needle the negative pole, and with a small sponge in patient's hand as a positive electrode, passed 18 m.a. for 15 minutes, from 40 Leclanché cells. This was attended by some burning, considerable evolution of hydrogen gas, with very slight hemorrhage. There was no dizziness, and no special discomfort in the nose afterward. Ordered frequent cleansing with boric acid solution. September 23—After treatment, slight bloody discharge from nostril. Stump of spur presented excavated center, with irregular, slightly sloughing margin, except that from the inferior portion a thin fragment, involving about one-fifth the circumference and extending almost the original length of spur, was still intact. Mucosa around spur and over inferior turbinated bone, hyperemic. September 25—Less discharge, less congestion; fragment same as on 23d, with very little tendency to sloughing. September 29—After exposure to violent north wind, inflammatory symptoms increased slightly, and during two days throat was sore on swallowing. October 4—Fragment detached and wound healing; hyperemia disappearing. While this case is as yet too recent to afford reliable evidence, conditions indicate that the wound will entirely heal, that the surface will be smooth, and that only a slight elevation will remain at the site of the enchondroma.

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[1] Journal American Medical Association, Vol. xxii, p. 709.

Observation of the consequent symptoms in this case, especially the marked hyperemia of the septum, convinces me that I allowed the needle to pass nearer the septum than was necessary, and impresses me with the important caution, that the operator must know, during every moment the current is passing, the exact direction and position of the electrolytic needle, which must not be allowed to attack innocent parts.

The only difference that I have been able to note between the behavior of enchondromata, under the influence of the current, and that of cystic and connective tissue growths, is that the processes of disintegration and of repair, are slower in the former. As would naturally be expected, from the nature of the tissues, there is less of the liquid products of decomposition attending the reduction of cartilaginous tissue.

The advantages of interstitial electrization in this class of growths are: (1) Absence of hemorrhage. (2) Comparatively little pain. (3) With reasonable precaution the ability to strictly localize the treatment, as well as to entirely control the extent and degree of alterative action. I also believe that these wounds heal smoother and with a more nearly natural surface than after removal by purely mechanical processes.

The scope of this paper forbids more than the briefest reference to interstitial electro-chemical medication, though the purely therapeutic function of the galvanic current is equally worthy of the closest study and fullest application. In many respects the physiological action, as well as the therapeutic effect of our commonest drugs, is much more tangible and is more easily recognized and estimated under electric action than by the methods ordinarily used. In fact, the principal electrolytic phenomena are so easily demonstrated, that whoever will make the effort may observe them for himself.

I say electrolytic phenomena advisedly, for I believe interstitial metallic electrolysis promises very much, not only in the classes of cases cited, but in many other conditions, as urethritis, endometritis, uterine hemorrhage, hemorrhoids, fistulæ, chronic ulceration, etc. In all conditions, where practicable, applying the medicament in pure state and solid form directly upon the diseased surface, or within the diseased structures.

In conclusion, I have not attempted to teach this subject, but simply to study electro-chemical metabolism, with the purpose of discovering its actual utility as a therapeutic agent and its general adaptability to the pathological conditions of which the reported cases may serve as suggestive types.

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ON SOME FORMS OF UTERINE HEMORRHAGE.

By Clinton Cushing, M.D., Professor of Gynecology, Cooper Medical College, San Francisco.

Read before the San Francisco Medico-Chirurgical Society.

It is with hesitation that I introduce to your notice so trite and well-worn a subject as uterine hemorrhage. And the excuse for so doing is the fact that the more frequent and common a disorder the more reason for investigating its nature, and discussing the ways and means for its relief.

The question of what constitutes a uterine hemorrhage is not always easy to determine, for what would be considered a normal blood loss at the menstrual period in one case would be an abnormal amount in another. This depending, doubtless, upon the blood-making powers of the individual. This capacity of converting nutrition into blood, happily for the female sex, being much greater than in the male, as evidenced by frequent examples, where women lose from 16 to 20 ounces of blood every month, and still remain in perfect health. So in any case we can only be justified in the opinion that a woman is losing an abnormal amount of blood, if the loss is attended by an impairment of the health.

Leaving out the cases of malignant disease, the large proportion of examples of excessive blood loss from the uterus are due to disease of its lining membrane, whatever the primary cause may have been, such as sub-involution, displacements, or deformities, chronic congestion, fibroid tumors, or injuries at the time of confinement, or abortions, there is one condition that invariably ensues, and that is, that the endometrium becomes thickened and pulpy, and not infrequently small fungoid growths project from the surface. As you all are aware, this condition is described in the books as fungoid endometritis. Where it exists the introduction, however gently, of a probe is followed by more or less oozing of blood.

The prognosis, as far as the immediate relief of the hemorrhage is concerned, is good, but the permanent cure depends upon the ability to remove the cause which eventuated in the disease membrane, and which, if remaining, would be likely sooner or later to reproduce the endometritis. The plan, that in my hands has been the most satisfactory, has been to put the patient under an anesthetic, introduce a Sims' speculum, draw down the cervix with a small vulsellum, dilate the cervical canal, when needed, with a steel dilator, and with a moderately sharp curette remove most thoroughly all the diseased membrane from the uterine cavity. No great amount of force should be used, but the curetting should be continued until the firm fibrous structure of the uterus is felt grating under the edge of the curette.

There is no fear of this procedure causing alarming hemorrhage, for the more quickly and thoroughly the membrane is removed, the more certain the cessation of the bleeding. It has been my custom to paint over the curetted surface with compound tincture of iodine, both for its alterative, as well as its antiseptic effect. The patient should be confined to bed for at least three days afterwards, as a precautionary measure. Vaginal injections of hot carbolized water every 6 hours tend to relieve pain and lessen the need of opiates, which, as a rule, are not required.

If pelvic inflammation follow, it is highly probable that infection has occurred from unclean instruments, or that the woman was suffering from disease of the fallopian tubes; and in this relation I would suggest that where there exists a history of a previous attack of pelvic inflammation, one or more painstaking and careful examinations be made to determine, if possible, the existence of salpingitis.

In the class of cases described, the topical application of astringents is unsatisfactory, for the profuse bleeding washes away the remedy, the coagula and sticky blood clots obstruct the field of vision, and the benefit, if any, is very temporary. The thorough application of fuming nitric acid is efficacious, but it is not infrequently followed by troublesome contraction and stenosis of the cervical canal.

A uterine probe connected with the positive pole of a galvanic battery and introduced into the uterus, and the current turned on for ten minutes, as strong as the patient can bear without great pain, will effect a cure in so far as the membrane is destroyed by the caustic action of the current, but the treatment is usually a long one; it is bloody and painful, and only after weeks, accomplishes practically what the curette does in a few moments.

Accidents, such as perforating the uterine wall by the curette, have been reported. Except in cases of cancer where there is marked degeneration, or, in some cases following labor or abortion, where the uterus is softened and in a state of fatty degeneration, the tissue of the uterus is so firm and resistant that it would seem to me only unusual and unnecessary violence could cause such injuries.

I desire to call attention to the fact that curetting has also a beneficial influence in lessening the size of the uterus in cases of sub-involution and in hyperplasia, more so, indeed, than any treatment of which I am aware.

One of the most common symptoms of cancer of the uterus is hemorrhage of that organ, and while it is true that cases occur, where unusual loss of blood does not happen until the affection is far advanced, it is the rule that there is an increased discharge of both blood and mucus early in the disease. Since cancer is so frequent and fatal a malady in women, and particularly so in women over 40 years of age, it is imperative that a careful examination be made in every case where the woman has increased secretions from the uterus, unless the cause is well understood, for if any real benefit is to accrue from treatment, the curative means must be applied before extension to the adjacent parts takes place.

With these established facts before us, I would urge upon all who are called upon to deal with the ailments peculiar to women, to so instruct their patients, that they shall apply for examination immediately upon the occurrence of unusual discharges from the uterus. This is more necessary in women over 40 years of age, and especially if they have passed the change of life.

The class of cases that appear to me to be the most difficult to correctly diagnose, are those where the neck of the uterus is badly lacerated, and a large eroded and granulating cervix presents to view. The diseased surface is studded with enlarged mucous follicles, is crowded with a muco-purulent secretion, and bleeds upon the slightest touch. Such cases present most of the symptoms of cancer, but observation has convinced me that a considerable proportion are not cancer, but simply the sequelæ of injuries sustained at some former accouchement.

How then are we to ascertain or determine the facts in cases of doubt and uncertainty? Introduce a Sims' speculum, draw down the cervix with a small vulsellum, and with a curved scissors or a sharp bistoury, cut out a wedge-shaped piece of the cervix, including the healthy as well as the diseased parts. Let the portion removed be as large as a good sized bean, so that the microscopist shall have ample material for a thorough examination, and now let an examination be made by some one fully qualified for the work. There are but few men, who, by reason of study and application, and on account of special aptitude, are capable of giving an intelligent opinion; but several are to be found in all the large cities, and they should be encouraged and supported in their endeavors to perfect themselves in their studies, by such compensation as the cases warrant. It is no trifling matter to advise a woman to submit to ablation of her uterus upon the bare suspicion that she had commencing epithelioma of the cervix. Since, in the microscope, we have an instrument of precision, that gives us, with a reasonable certainty, a clear statement of the pathological facts, by all means let us avail ourselves of all it can do toward proving or disproving our opinions and theories.

In several instances in the last five years, women (one of them the wife of a well known physician) have applied to me for an opinion regarding their condition, which has been pronounced by educated men to be undoubted commencing epithelioma of the cervix uteri. As I could discover no reason for such an opinion, a small piece of the cervix was removed and submitted to microscopic examination, with the result that no evidence of malignancy was discovered. Bad lacerations of the cervix were repaired; the patients promptly recovered and remain well to this day.

When cancer of the uterine cavity exists, the curette removes masses of diseased tissue, often of an encephaloid character, that enables one to form an intelligent opinion, based on a microscopical examination of the fragments.

In the treatment of cancer of the uterus, with its attendant hemorrhage, one of two plans should be adopted. If the disease is probably confined to the uterus, the whole organ should be extirpated at once, with the hope of effecting a permanent cure. If the affection has invaded the surrounding structures, the disease should, as far as possible, be removed with the sharp curette, and the cavity packed with astringent gauze, by this means getting relief, at least temporarily, from the exhausting discharges.

A case was recently under treatment at the Lane Hospital that is of interest in this connection. A woman, 58 years of age, who had ceased menstruating ten years previously, applied for relief on account of uterine hemorrhage of such severity as to cause marked anemia. She had undergone local treatment for two years, by a physician, without relief. A digital examination disclosed a mass the size of a turkey egg, filling the upper part of the vagina so fully as to prevent the cervix from being reached. The mass was very hard and nodular, but in spite of the woman's age and the probability of malignancy, the diagnosis was made of a fibroid polypus growing from the cervix, with the possibility of malignant disease of the cervix in addition. Ether was administered and the mass removed, piece by piece, with a heavy curved scissors, until the cervix came into view, when it was found that it was attached to the inside of the cervix by a pedicle the size of one's finger; the cervix was otherwise healthy, and the uterine body but slightly enlarged. The hemorrhage at once ceased and the recovery was uninterrupted.

This case is reported as an instance of the possibility of the formation of a fibrous polypus of the uterus after the menopause, causing a uterine hemorrhage 8 years after the cessation of menstruation. From the history, it is probable that the growth was mistaken for the cervix, and the treatment applied to the polypus under a misapprehension of the facts, an error that might easily occur to any one not familiar with disorders of this character.

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A CASE OF INDUCED INSANITY.

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Read before the California Northern District Medical Society.

Induced insanity, known among the French writers as *folie à deux*, was described in 1873 by Lasègue and Falret. They had observed that in certain instances, where two or more individuals had lived together intimately for some time, and had had but little influence from without, a psychic infection had taken place. In such cases the induced form in the so-called passive element would develop in one, who was not mentally well. The source of the psychic infection would be found in an individual, the active element, who stood intellectually higher; he originated the delusions, etc., and impressed them upon the passive element, who, in the majority of cases, presented milder symptoms. Where insanity was induced, the delusions were found to have some air of probability. The infection would usually extend from an active to one passive element, but sometimes to two or more; it would become a *folie à trois*, or even *folie à quatre*.

Since the publication of Lasègue and Falret, many cases have been reported by various writers, especially by Régis, Marandon de Montyel and Arnaud[1]. The last two authors describe three forms of *folie à deux;* (1) *Folie imposée*, or induced insanity, which is characterized by a minimum of resistance in the passive individual, who, in many cases, does not become fully insane, and whose symptoms frequently resemble, in every particular, those of the active element. (2) *Folie simultanée*, in which the same psychosis developes in two individuals, who present a history of the same degree of heredity and predisposition, who have led a very intimate social life, and who have been subjected to equally important direct causes. (3) *Folie communiquée*, in which a patient communicates his delusions to an individual, who is possessed of the maximum of resistance, and doubting the reality of the delusions, for some time, does not become affected until after the long struggle has brought about a cerebral exhaustion.

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[1] Annales Médico-Psychol., May-June, 1893.

A special form of *folie à deux* has been described by Prof. Ball and certain English writers, under the name of *folie gémellaire;* it has been applied to the simultaneous appearance of a similar insanity in twins, sometimes even when at a distance from each other. This is, therefore, a special form of *folie simultanée*. The distinction made by Montyel and Arnaud between *folie imposée* and *folie communiquée* is not very clear. It seems to me that there are only sufficient grounds for a subdivision of *folie à deux* into *folie communiquée* and *folie simultanée*, with its special form of *folie gémellaire*. The case, which I have had under observation, would appear to belong to the third form of *folie à deux*, as described above, namely, *folie communiquée*.

H. M——, 62 years old, native of Germany, ship's carpenter by trade, and his wife, A. M., 63 years of age, also a native of Germany, were admitted to this asylum January 25, 1894. Very little is known concerning the family history of the wife. H. M. says, since his recovery, that two sisters and two brothers of his wife, and their children, with whom he was acquainted, were well mentally. In his own family there is no history of neuropathy. The patients were married in Germany, in 1860; they have no children. They left Germany in 1861, and settled in Milwaukee, Wisconsin, where the wife's relatives, above referred to, were living. In 1888, they came to California, and H. M. soon afterward found work at the railroad shipyard, in Oakland. He had never suffered from any physical illness up to this date, and was not addicted to liquor.

In the early part of January, 1892, he lost the sight of his left eye by being struck by a piece of wood, while at work in the shipyard. After this accident he worked steadily for two or three months, when one evening, May 6, 1892, he was knocked down by a vagrant, who was doing some mischief in the yard. When he recovered consciousness, after a few minutes, he felt blood trickling down his face and found that he was totally blind. He had received a cut over his right eyebrow, and the eyeball and upper lid were bruised and swollen. On the following day he was taken to the hospital, where he was treated for about three months, without benefit.

When the patients were admitted to the asylum, January 25, 1894, they seemed to be suffering from the same delusions of persecution. They were cognizant of time and place, and talked freely about the abuse which had been practised upon them. The wife is physically well, mentally hallucinatory, and very delusional; she tells of a murder-club, that killed all her nephews, put her husband's eyes out, and tried to poison her, etc. A whole pile of money has been left them by wealthy nephews, which money is in the Court-house, but people are preventing them from getting hold of it. The husband says that the murderers made him blind in the Railroad Hospital. "People are trying to get us out of the way, so as to get hold of the money willed to us." Eighteen members of his wife's family have been murdered in the hospital. The people of Oakland are not allowed to speak to them or go to see them. Jack the Ripper lives alongside of them; he is dressed up as a woman, and lives with the "poison mixer." People are killed in a certain room in their house. "I know Jack the Ripper did some of his work in the hospital. My wife knows more about it. When she first told me about it I would not believe it, but I found out afterwards." H. M. was found to suffer from a severe right-sided supraorbital neuralgia, the pain centering about a scar over the eyebrow.

After the patients had been isolated about a month, H. M. appeared to have recovered mentally, and was able to give the following additional information concerning his own and his wife's mental trouble: "During the part of my stay in the Railroad Hospital, my wife would, whenever she visited me, express great fear that some one would do me some harm, that some one would kill me, and she also thought that some one had designs on her. It was not until some time after I had left the hospital that my wife spoke of the conspiracies, etc. She would always after this take the key along when she went out to work, and would not let me go outside unless she was along. My wife heard voices in the night as well as in the day time; the voices told her who had made me blind, etc. After I received the blow in the right eye, I suffered fearfully from pain in the right side of my head, and the pain never left me. It was about four months after I left the hospital before I began to think as my wife did. I could not read, no one came to talk with me, and I heard constantly my wife repeat her fears and suspicions."

In the above case of *folie à deux*, it would appear that the wife, as the active element, at first presented symptoms of Wahnsinn, or acute paranoia, which gradually led to the development of systematized delusions. According to her husband's statement, she was of a wilful and independent disposition, of only average intelligence, but had had a better education than he; such a character being, according to Arnaud, more frequently met with in the active element than a higher degree of intelligence. With regard to the etiology of the disease in the passive element, it is first to be remembered that no psychosis is capable of being developed without the preëxistence of a pathological condition of the brain; a *folie à deux* can, therefore, not be induced in a person possessed of a healthy brain.

The question is, then, what caused the predisposition in the husband? It would seem that of predisposing causes there was one which predominated, namely, the supraorbital neuralgia which lasted for nearly 21 months prior to his commitment. This might, on account of the anatomical relationship of the trigeminus to the vasomotor nerves of the brain and its membranes, cause stimulation of the vasomotor nerves, and a change in the blood supply to the brain, and thus create the necessary predisposing pathological basis. A pyschosis would, of course, not necessarily follow upon the development of a neuralgia and accompanying symptoms; the latter would only furnish the proper soil, upon which delusions, such as he was constantly listening to, might easily become imbedded. Recovery in this case resulted a few weeks after isolation of the patients had been instituted, notwithstanding the continuance of the neuralgia, which did not subside for months afterwards.

The majority of cases of *folie à deux* present, according to Arnaud, symptoms of paranoia. In the above case we find a system of delusions, which, as in all cases, are the same in both patients. H. M. and his wife gave expression to the same persecutory ideas, and made the same accusations. *Folie à deux* is usually, but not always, a systematized delusional insanity, as the cases to be cited below would show.

Though many cases of induced insanity have been reported, they are, it would seem, not very common, as publications of single instances continue to appear. Dr. Roller,[1] of Lindenhaus Asylum, Germany, reports a case as the only one of real induced insanity in that institution. Dr. Werner succeeded in collecting but 45 cases from the literature. I have examined the records of the State Insane Asylum at Stockton since its foundation, in 1852, and as far as I can judge from the information at my command only six cases, besides the foregoing, have been admitted that could come under this classification. During this period (43 years) 12,892 men and women (including re-admissions) have been received. In closing my paper I will append a few brief remarks about each of these supposed cases of *folie à deux:*

CASE 1.—S. F—— and T. F——, brothers; admitted on the same day, February 25, 1866; farmers; natives of Missouri; no family history. S. F., 39 years of age, married, has two children; has had two similar attacks preceding this; one in 1856, the other in 1862, each of short duration. This last attack set in about a week ago.

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[1] Allg. Zeitschr. f. Psychiatrie, Vol. 50, Nos. 3 and 4, page 722.

T. F., 45 years of age, single; has been living with his brother for some time; this is the first attack, and began three days ago. The same mental symptoms are present in both; aural hallucinations of a religious nature, communications with spirits, violence toward surroundings, destructiveness to furniture and clothing. T. F. died of Bright's disease, April 10, 1866. S. F. was discharged May 15, 1866.

CASE 2.—F. C. D—— and P. D——, brothers; natives of Maine; admitted March 29, 1869; no family history. F. C. D., 42 years old, laborer, single; has been insane for about two years, during which time he has been more or less constantly with his brother. P. D., 49 years old, farmer; married, seven children; attack first noticeable about two years ago. Each patient is in constant communication with God, hears His voice, and only does what the voice tells him to do. They are exalted, noisy, destructive, and filthy in habits. F. C. D. proved to be an incurable case; died of consumption May 4, 1888. P. D. was discharged from the asylum May 3, 1869.

CASE 3.—E. L. W—— and M. S——, twin sisters; natives of Massachusetts. E. L. W. admitted January 8, 1870; 40 years, married, has six children, youngest two years old; is violent toward husband and children when opposed; is suicidal, has attempted to cut her throat and poison herself; is destructive, noisy, and untidy. She had a similar attack in 1863, lasting a year, and several attacks of short duration at intervals since. Discharged from asylum June 2, 1873, to be cared for at home. M. S., admitted January 14, 1876; 46 years old; married, has four children, youngest nine years old; in personal appearance strikingly like her twin sister, whom she has recently nursed during a recurrent attack. The first mental symptoms showed themselves in M. S. three or four months ago. She has been noisy, violent toward surroundings, and has attempted to kill herself by taking poison. The delusions were the same in her case as in her sister's. She is subject to aural hallucinations; her family will starve and go naked unless she is with them, etc. E. L. W. committed suicide in her home in August, 1879. M. S. was discharged from the asylum January 15, 1888. The children of both are sound mentally; the grandfather of the patients was insane.

CASE 4.—A. P—— and L. P——, twin brothers; natives of Indiana; single; school teachers by occupation; admitted on the same day, January 11, 1876; family history unknown. They resemble each other so that their brother, who, two weeks afterwards, had them transferred to an institution in Missouri, could not distinguish one from the other; they were dressed alike, and arrived with their throats cut. The mental symptoms are the same in both, and they are said to have been attacked for the first time, and simultaneously, about a month ago. They are subject to aural and visual hallucinations; are immediately directed by God, see spirits, and abstain from food under divine direction. A. P. was inspired by God to offer himself as a sacrifice to save the world, etc., and accordingly cut his throat; upon which L. P. immediately did the same.

CASE 5.—M. J. I—— and A. M. I——, mother and daughter, admitted on the same day, April 2, 1883; family history unknown. The mother, M. J. I., is 43 years of age, a native of New Hampshire; widow, has two children, youngest 14 years old. The daughter is a native of California; single, 20 years old. The mental symptoms presented by each patient are identical; in the mother they have been coming on for several years; in the daughter they are of recent date. They are subject to persecutory ideas—people are trying to poison them, spirits are pursuing them, they hear the noises made by them. The poison is being administered in the form of gases, which enter their room through the window; they have taken no nourishment for some time for fear of being poisoned; medicine is prescribed for them by spirits. The daughter was discharged, recovered, five weeks after her admission. The mother remained in the asylum until June 3, 1884.

CASE 6.—M. M—— and E. M——, sisters, Americans, single. M. M. had had a mild attack of insanity in 1882, and another one in 1884, during which commitment did not become necessary. In 1886 the two sisters, aged respectively 22 and 20 years, after having fasted considerably during the Lenten season, went on an excursion, when they suddenly became excitable and demonstrative, accusing a number of men of having drugged and outraged them, which accusations were afterwards found to be based upon hallucinations and ideas of persecution. M. M. became so noisy and unruly, destructive, and violent that it became necessary to commit her, April 5, 1886; while E. M. presented similar symptoms, but milder in nature. She was kept at home, and soon recovered. M. M. was discharged from the asylum July 31, 1887. On March 15, 1891, again during Lent, M. M. was recommitted to the asylum, and this time her sister was sent with her. They were suspicious, obstinate, and restless, E. M. being this time more violent and exalted than her sister, but otherwise subject to about the same delusions. E. M. was discharged, recovered, after a stay of 3½ months. Her sister remained 6½ months at the asylum. They are said not to have had any relapses up to date.

Of these cases, the third and fourth are very interesting as forms of insanity developed in twins, the former being an illustration of the very rare form of *folie gêmellaire*, the latter being a case of *folie communiquée*.

THE DIAGNOSTIC SIGNIFICANCE OF ALBUMIN IN THE URINE.

By ALBERT ABRAMS, M.A., M.D., Professor of Pathology, Cooper Medical College, San Francisco, Cal.

The detection of albumin in the urine serves only as a clue to certain evidence which must be unraveled by the physician. He must be prepared to answer the following questions: (1) Is the albuminuria nephrogenic (true albuminuria)? (2) Is the albuminuria physiologic? (3) What is the chemic nature of the albumin? The object of this article precludes a detailed consideration of these questions. In the present state of our knowledge much of the evidence which can be adduced in the differentiation of these problems is not more than problematic.

I. *Is the Albuminuria Nephrogenic?*—Nephrogenic albuminuria is associated with organic disease of the kidney. This form of albuminuria, however, accompanies a long list of affections, in which no definite recognizable renal lesion exists. It must be conceded in the light of recent researches, that in many cases of albuminuria, kidney lesions are present. This is notably the case in the so-called febrile albuminuria. This affection is common, and is attributed solely to changes in the glomeruli produced by the fever, such as cloudy swelling, which is not usually dignified as an organic lesion. Modern investigations show that, in the majority of infectious diseases, septic nephritis exists as a complication, and is engendered by the presence of microörganisms, which can be cultivated *intra vitam* from the urine. A bacteriological diagnosis made after this manner for clinical purposes has undeservedly been neglected. The urine in the bladder is normally sterile, and it is only after it attains the urethra that it becomes contaminated with bacteria; therefore, urine designed for bacteriological examination must be withdrawn from the bladder by means of a sterile catheter.

We can usually exclude nephrogenic albuminuria when we are able to establish definitely a false or mixed albuminuria. In false albuminuria (pseudo-albuminuria), the albumin found in the urine has an extra-renal origin, and is derived from the ureters, bladder, or urethra, and is produced by accidental contamination with blood, pus, semen, etc. In the diagnosis of pseudo-albuminuria the following signs are of advantage: (1) The percentage of albumin is small, and never more than can be accounted for by the quantity of the sediment in the urine. (2) Absence in the sediment as determined by the microscope of morphological kidney elements (casts and epithelial cells). (3) Presence of local symptoms and the absence of somatic signs, referable to kidney disease.

Pus in the urine is the most frequent source of pseudo-albuminuria, and an enumeration of pus corpuscles furnishes us not only with a clue to the severity of an inflammation in the uropoietic tract, but establishes the percentage of albumin, which should be present. This method of examination, originating with Posner, of Berlin, I have found quite trustworthy, as determined by control experiments. The pus corpuscles are counted with the Thoma-Zeiss apparatus in the same manner as we enumerate the blood corpuscles. From 20 to 40,000 pus corpuscles in a cubic millimeter indicate a bladder catarrh of moderate severity; whereas, in severe catarrh of that organ, 100,000 pus corpuscles in the same area may be counted. The percentage of albumin with the latter number of pus corpuscles is never more than $\frac{1}{10}$ per cent. If, for example, the urine contain 40,000 pus corpuscles in a cubic millimeter, and the amount of albumin is $\frac{2}{10}$ per cent., the conclusion is evident that the albumin present in the urine is not derived wholly from the pus serum, but other sources contribute to its presence. This simple and relatively accurate method is in many respects applicable to the estimation of the percentage of albumin when produced by the presence of blood. In brief, we are permitted to say that in the highest grade of pyuria, not more than 1 pro. mille of albumin is present; if this percentage is exceeded, renal complication must, as a rule, be admitted.

In estimating the percentage of albumin in the urine, the albuminometer of Esbach (*vide* MEDICAL TIMES, vol. vi, p. 180) is accurate enough for all practical purposes. By the aid of uretral catheterization and the cystoscope we can frequently locate the source of pseudo-albuminuria; but these methods of examination are not usually available for the general practitioner, in which case recourse must be had to the plan of separating discharges from the anterior and posterior urethra, prostate, seminal vesicles, and bladder. In the so-called mixed albuminuria, where the albumin is derived not only from the kidney, but from other parts of the urinary tract, the diagnosis is more difficult, and can only be established after a most thorough chemic and microscopic examination of the urine, and a faithful inquiry into the status of the circulatory apparatus.

II. *Is the Albuminuria Physiologic?*—When urine contains a small quantity of albumin without morphologic renal elements, and the individual presents no symptoms of an acute or chronic disease of the kidneys, the manifestation is denominated physiologic albuminuria. Physiologic albuminuria occurring with more or less periodicity after cold baths, muscular exertion, physical disturbances, gastric derangement, etc., is specified as cyclic albuminuria. It is relatively frequent in young persons, in whom physical rest causes a disappearance of the albumin in the urine. There is a diversity of opinion among authorities whether the so-called physiologic albuminuria is really physiologic, or whether the occurrence of albumin in the urine is always pathologic. Those who maintain the former view, present as an argument, that physiologic albuminuria is never inimical to life; nor, for that matter, is glycosuria, yet it is pathologic. Nephrogenic albuminuria must always postulate an implication of the cells of the kidney, particularly those of the glomeruli, which allow some of the albumin circulating in the blood vessels of the kidney to pass into the urine.

The following reasons are usually advanced, affirming the reality of physiologic albuminuria: (1) The percentage of albumin is always small. (2) The frequent occurrence of albumin in the urine of apparently healthy persons. (3) The occasional disappearance of albumin in the urine. (4) Absence of morphological kidney elements. (5) The absence of clinical manifestations. These propositions are not tenable. The percentage of albumin in the urine is no index to the severity of a renal lesion. In chronic interstitial nephritis, only traces of albumin are usually found, and in many cases it may be absent at times, particularly in the morning urine. The statement that traces of albumin can be found in the urine of nearly every healthy individual, is, according to recent observations, incorrect. The substance purporting to be albumin, is not albumin, but nucleo-albumin, a substance presenting reactions similar to true albumin. The occasional diminution or disappearance of albumin in the urine does no more to argue for physiologic than it does for pathologic albuminuria. Even in some pronounced forms of renal disease, albumin will occasionally disappear, whereas in nearly all cases we can establish an albuminuric curve; the excretion in the amount of albumin being dependent on a number of conditions, notably muscular activity, diet, and the state of the various emunctories.

The absence in the urine of casts and renal epithelial cells is perhaps the most important sign in differentiation, but unfortunately, in interstitial nephritis, where the percentage of albumin is also small, casts are usually absent. There are, however, so many other signs of interstitial nephritis, that its confusion with physiologic albuminuria is practically impossible. The absence of clinical manifestations means nothing. In a large number of cases, disease of the kidney is only accidentally discovered by examination of the urine. The most frequent clinical manifestation of renal disease is the discovery of albumin in the urine. Experience has taught that cases of so-called physiologic albuminuria have been followed later in life, by indubitable kidney disease. The diagnosis of physiologic albuminuria should only be made with great circumspection. Not only must we exclude the usual concomitants of kidney disease (hydrops, uremia), but also heart hypertrophy and increased arterial tension.

What is the Chemic Nature of Albumin? There are at least eleven proteids in the urine, yielding a reaction similar to albumin (serum albumin). Many of these bodies in the present state of our knowledge, are of little import. The proteids present in the urine are as follows: (1) Serum albumin. (2) Serum or paraglobulin. (3) Fibrin. (4) Fibrinogen. (5) Hetero-albumose. (6) Deutero-albumose. (7) Proto-albumose. (8) Pepton. (9) Hemoglobin. (10) Mucin. (11) Nucleo albumin.

The albumoses give the Biuret reaction. It is now regarded as certain, that what was formerly supposed to be peptonuria is, in reality, albumosuria. The diagnostic significance of the albumoses in the urine is held to be identical with that of pepton. The most important of the proteids in the urine, is nucleo-albumin, a substance frequently mistaken for true albumin. Recent researches show that the substance formerly looked upon as mucin, is nucleo-albumin. Mucin contains no phosphorus and yields albumin and a carbohydrate on disintegration, whereas nucleo-albumin contains phosphorus and in its decomposition yields a phosphorus containing group (nuclein) and albumin. Nucleo-albumin is physiologically present in every urine; in part in solution, but in greater part undissolved, as the so-called clouds (nubecula). Nucleo-albumin is pathologically increased in many catarrhal affections of the urogenital tract.

Nucleo-albumin yields with nitric acid (Heller's test) a reaction similar to serum albumin, and for this reason it is commonly confounded with the latter. To demonstrate the presence of nucleo-albumin held in solution, we avail ourselves of the following reaction: The urine is first diluted to prevent the precipitation of urates and to counteract the uric acid salts which assist to maintain nucleo-albumin in solution; acetic acid in excess is now added to the urine, when, if nucleo-albumin is present, the urine becomes cloudy. Globulin may be precipitated by acetic acid, but it is redissolved by the addition of an excess of acid.

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A CASE OF DOUBLE HUMAN MONSTROSITY—PROSOPO-THORACOPAGUS.

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Read before the California Academy of Medicine.

The mother was a prima para, æt. 32 years; a native of Denmark, in good health and of medium build. The father, æt. 33 years; a native of Ireland; of heavy build, somewhat corpulent, given to the excessive use of stimulants, and subject to epileptic fits. During pregnancy, no particular symptoms of note were present.

July 4, 1894, at which time the mother considered herself to be in about the seventh month, the amniotic sac ruptured unexpectedly and uterine pains commenced. Twenty-four hours later I saw the case, in consultation with Messrs. Wright and Reith, students in the senior class of the Medical Department of the University of California. They reported that the escape of fluid had been continual since the time of rupture, and that the pains had been increasing in frequency and severity.

I found labor well advanced in the second stage, the expulsive pains being regular and vigorous. Digital examination showed complete dilatation of the cervix, with a knee presenting. The foot was easily secured, and its fellow soon followed. Delivery was then attempted by means of moderate traction. The buttocks advanced to the vulvar opening but could not be drawn further. Search for the cause of obstruction revealed another knee, lying to the left of the superior strait. Under the impression that the case was one of locked twins, an attempt was made, under partial anesthesia, to restore the first fetus to the uterine cavity, with a view to disentanglement. This restoration was in part successful; but during the manipulation a second pair of lower limbs, accompanied by an arm, descended into the vagina.

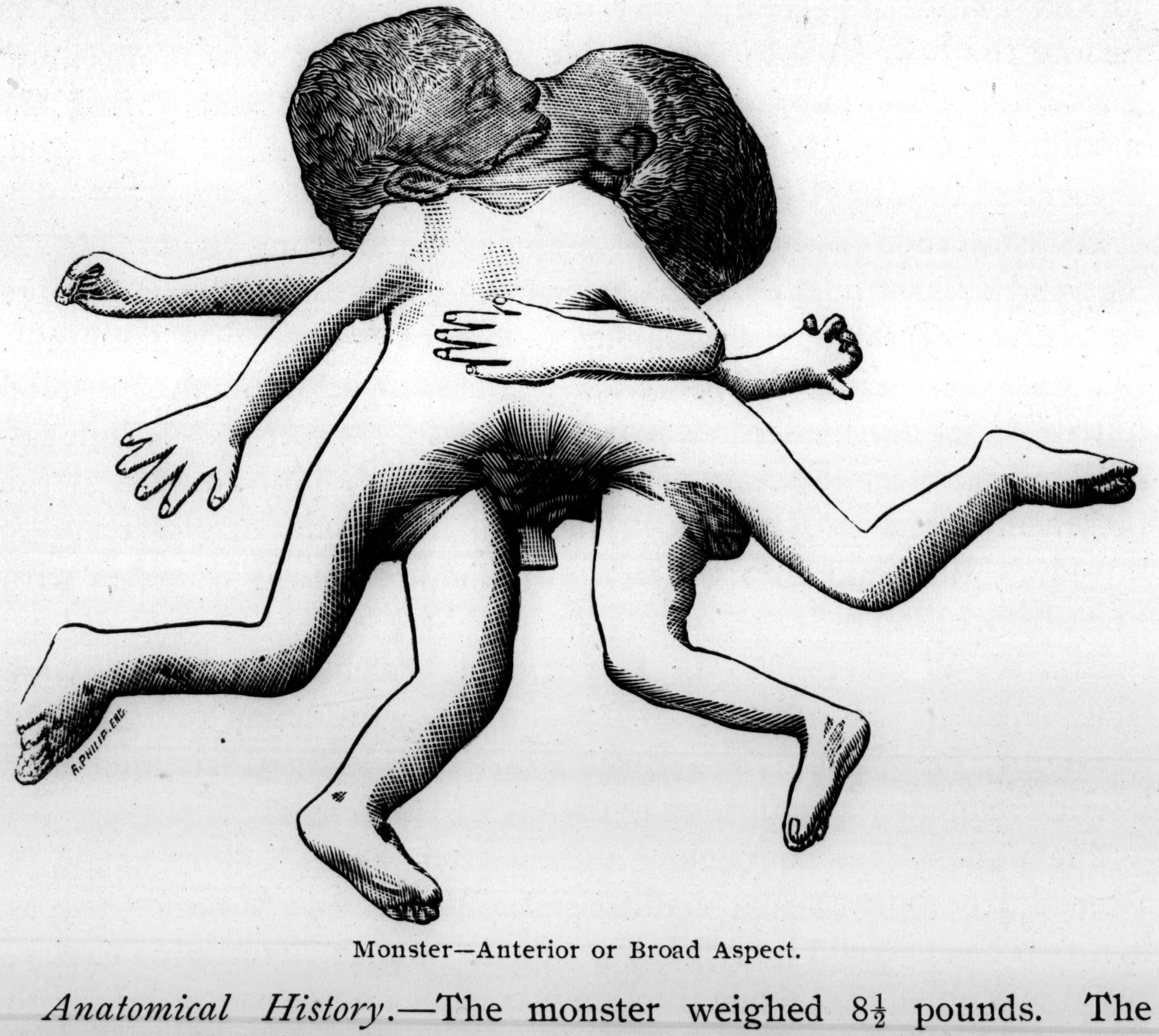
We were then confronted by the somewhat startling feature of four legs and an arm in the vagina at one time, and all exhibiting active signs of life. There was a marked difference in the size of the limbs. the first pair being well developed and showing evidence of good nutrition, while the second pair presented a thinner and less developed appearance. Owing to the escape of the liquor amnii and the presence of the two trunks in the superior strait, any attempt to introduce the hand into the cavity of the uterus was attended with great difficulty.

Drs. W. W. Kerr, W. B. Lewitt and Washington Dodge were summoned in consultation. The former gentleman immediately advanced the opinion that it was a case of "Millie-Christine," and later developments confirmed the truth of the remark.

The patient was completely anesthetized, and an effort made to ascertain the intrauterine condition of affairs. By abdominal palpation two heads could be felt lying side by side in the uterine cavity, and it was noted that when traction was made on one pair of legs both heads moved downward. Repeated attempts at manual exploration were made without success. Dr. Dodge finally succeeded in passing his hand between the two heads, and discovered that they were joined above the necks. While making the investigation he felt them suddenly part, and almost immediately they began to descend, aided by firm traction on the limbs. A few minutes more brought about complete delivery of the monster.

As the pelves emerged through the vulva a large blue tumor appeared between the two pairs of thighs. This tumor suddenly ruptured, and two livers and a mass of intestines were extruded. The placenta was single and of moderate size.

As a result of the prolonged anesthesia and manipulation, the mother was much prostrated, but reacted well, the only bar to speedy recovery being a remittent fever of a few days' duration, probably of malarial origin. The cervix was lacerated, but the perineum was intact. The monster was badly mutilated by the repeated efforts to carry the hand into the uterus, and by the tearing apart of the heads, previous to complete delivery; the rent from the latter cause extending through the tissues of the neck well down on the thorax. The abdominal cavity was opened, and both spinal columns were found to be fractured.



Monster—Anterior or Broad Aspect.

Anatomical History.—The monster weighed 8½ pounds. The length of the larger fetus was 14 inches; that of the smaller, 13½ inches. Occipito-frontal circumference of larger head, 10¾ inches; of smaller head, 10¼ inches. Circumference of double cephalic mass, 15¾ inches. Bioccipital diameter, 10 inches. The general appearance is that of two infants confluent on the anterior surfaces of their necks, thoraces and abdomina. The left sides of the two faces are in close contact, and the heads are tilted backward, so that both faces look slightly upward. Each fetus has a normal development of arms and lower extremities. On separating the heads, the tissues over and below the left malar bones are found to be in close contact and much flattened from pressure, presenting, practically, a beveled aspect, admitting of a more exact approximation. The lower parts of contiguous cheeks are fused.

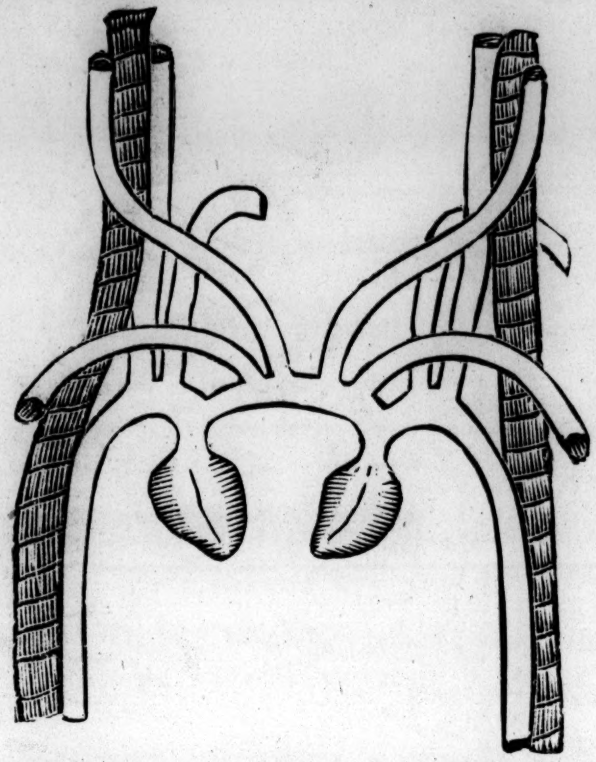
The thoraces are united at an angle, the left shoulder of the larger fetus closely approaching the right shoulder of the smaller, there being about 1½ inches of space intervening. On the reverse aspect, the space between the shoulders is fully 3 inches. From the umbilicus down, the appearance is that of two well developed female infants. The umbilicus is common to both, and is situated at the junction of the two abdomina. It is surrounded by an irregularly circular space, about 3 inches in diameter, which occupies the under surface of the common body. In this space the integument is deficient, the area being covered by a thin membrane continuous with that covering the cord and shading off into the surrounding skin. The distension of this membrane, caused by pressure on the abdominal contents, produced the blue tumor seen during the delivery; the rupture occurred at the junction with the skin. The cord contains two arteries and two veins, and bifurcates about 1 inch from the abdominal wall, the hiatus between the divisions being bridged over by an extension of the membranes inclosing the cord and umbilical area. The external genitals of both are female and well developed.

In order to facilitate description, the broad surface of the joined thoraces may be termed *anterior*, and the opposite narrow surface *posterior*. In the median line of each surface is situated a sternum, which articulates with the normal number of ribs. The ribs articulate normally with the spinal columns, so that each sternum is common to both thoraces. The vertebral columns are normal with relation to ribs and crania. A simple description would be to state that the monster has a compound thorax, bounded anteriorly and posteriorly by the sterna and costal cartilages and laterally by the vertebral columns and ribs. Owing to the abnormal relations of the scapulæ to the sterna, the clavicles present a peculiar appearance, and are rotated in such a manner that their anterior borders present inferiorly, the outer half of each presenting a curve with the convexity upward, the concave under surface partly accommodating the head of the humerus.

When the heads are drawn apart, a common buccal cavity is found. Its floor is represented by a concave area covered by mucous membrane and offering for inspection two tongues, two laryngeal orifices, and one esophageal opening. There are two inferior maxillæ; each articulates with both skulls and bears a normal relation to the median line as represented by the sternum of its particular aspect. That extending between the skulls on the narrow aspect is merely a straight bar, 1½ inches in length, with rudimentary condyles, caronoid processes and angles; it has a groove on the posterior surface representing the inferior dental canal, but shows no trace of alveoli. The maxilla on the broad aspect is 2¼ inches in length, and consists of two halves united by a symphisis; one-half of the bone is reversed in position, so that its alveolar border, sigmoid cavity and condyle look downward, while the angle articulates with the glenoid fossa.

The two tongues differ in size; the larger is well developed and points toward the median line of the broad aspect, being in normal relation to the inferior maxilla of that surface. Anterior to it is a laryngeal orifice guarded by a small epiglottis. The other tongue is rudimentary, and is located to the right of the median line of the narrow aspect, consequently it is not in normal relation to the maxilla. It projects directly upward for about half an inch from the floor of the buccal cavity, and has papillæ on both surfaces. At the left margin of its base is situated the second laryngeal orifice with its epiglottis. The distance between the two laryngeal orifices is about three-quarters of an inch, and the space is occupied by a funnel-shaped esophageal opening. A complete lower lip is formed in normal relation to each lower maxilla. The upper lips are perfect on the opposite right sides, but the left angle of each is absent, owing to the malposition of the corresponding lower lip. Each face has a cleft extending from a point where the left angle of the mouth should exist, nearly to the ear of the same side, where the tissues of the lip blend with the mucous membrane of the cheek and gum. The superior maxillæ are deficient on the left side where the faces are in contact. The soft palate and uvula of each are cleft.

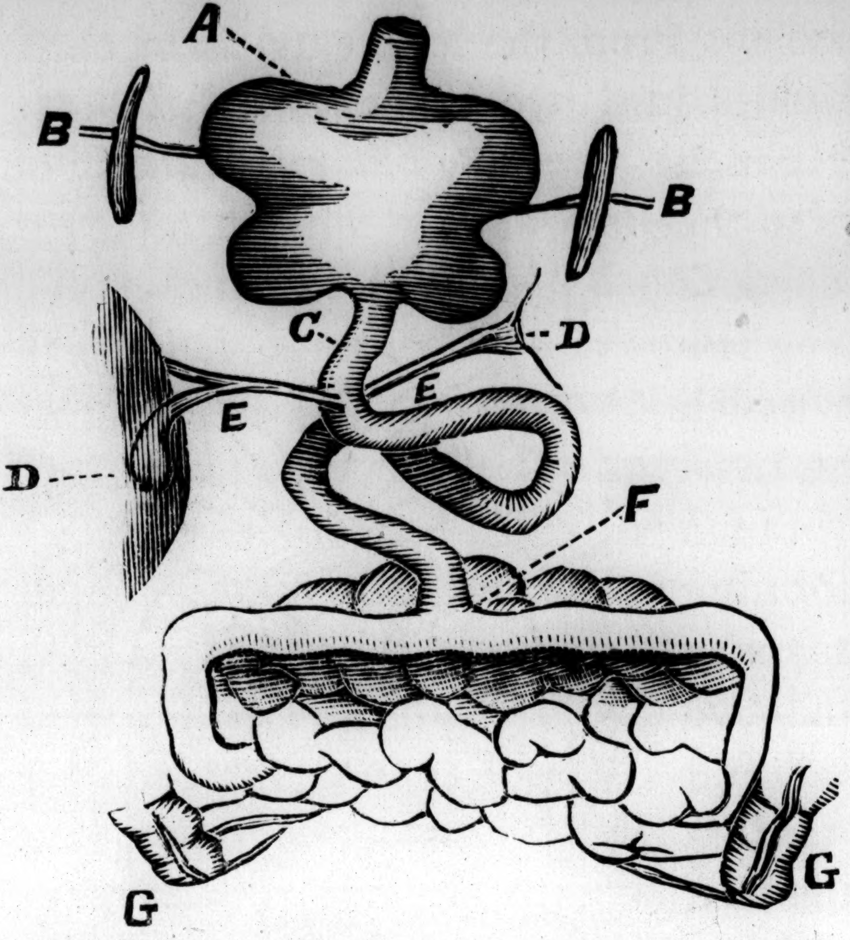
Examination of Thorax.—On opening the thoracic cavity two hearts are found, one lying behind and slightly to the left of the sternum of the narrow aspect, which position locates it on the left side of the larger fetus. This heart lies between a pair of lungs which are connected with the trachea passing down from the larynx found behind the tongue on the narrow aspect. One lung lies in the left pleural cavity of the larger fetus, and the other in the right pleural cavity of the smaller fetus. Both lungs of this pair receive their blood supply from the heart between them. The second heart lies behind and to the left of the sternum of the broad aspect, and is placed to the left side of the smaller fetus. It also lies between a pair of lungs, one of which is placed in the left side of the thorax of the smaller fetus and the other in the right side of the thorax of the larger fetus. The pulmonic circulation corresponds to that of the opposite aspect. Each heart is normal with respect to number of cavities and origin of great vessels. From the left ventricle of each heart arises an aorta, which divides into two branches a short distance above its origin; one branch forms the aortic arch and passes to the left, becoming the descending aorta of the fetus to which the heart giving rise to the vessel belongs; the other branch passes backward and to the right, inosculating with a corresponding branch from the other aorta and forming an arterial loop. From the convexity of the aortic loop two carotid and two subclavian arteries are given off and pass to the adjacent necks and axillæ of the broad aspect. The carotids and subclavians of the narrow aspect take their origin from the aortic arches beyond their divisions, one carotid and one subclavian arising from each arch. Each heart receives an ascending and descending vena-cava. The formation of the descending cavæ could not be determined on account of the mutilation of the necks and thorax. The inferior cavæ are joined by a venous loop below the diaphragm.



Schematic drawing of hearts, with aortic loop and arches, and origin of carotids and subclavians.

Examination of Abdomen.—The stomach is single, and from its peculiar form gives an idea of the fusion of two, the esophagus entering it above, at the junction of two lesser curvatures. The duodenum leaves it below, almost opposite the esophageal opening, and passes directly downward for about an inch, where it bends directly backward, nearly forming a right angle. At this angle two common gall ducts open, one on each side, and at the same points two pancreatic ducts enter. The convolutions of the jejunum can be traced for several inches, to a point where an inverted **T** is found. From this junction the digestive tracts are separate, and each fetus has its separate ileum, cecum, colon and rectum. The vermiform appendices are fully three-quarters of an inch in length. There are two spleens, lying one on each side of the stomach and connected to it by gastro-splenic omenta. The livers occupy a large portion of the abdominal cavity. Owing to their displacement, during delivery, their exact relation could not be determined. A pancreas lies in front of each spinal column and sends a duct to open at the termination of the common gall duct. The kidneys are normally situated in each fetus, and the pelvic viscera are also normal. A peculiar circumstance is, that when the abdomen was opened the cross-bar of the inverted **T** was in a gangrenous condition, while the remainder of the intestinal tract was in a state of perfect preservation.

I am indebted to Dr. J. H. Barbat, Demonstrator of Anatomy in the Medical Department of the University of California, for able assistance in the dissection and description of the monstrosity; also, to Mr. Frank Davy, of Taber's gallery, Mr. Wm. G. Hay, of the Medical Department, and Mr. B. Stich, of the College of Dentistry, for photographs and drawing of the subject.



Schematic drawing showing arrangement of intestinal canal: *A*, stomach; *B B*, spleen; *C*, duodenum; *D*, livers; *E*, common gall ducts; *F*, inverted **T**, junction of jejunum with ilea; *G*, ceca, with appendices.

21 Powell street.

MEMORANDA.

Total Extirpation of the Parotid Gland.

Miss X——, aged 17 years, was referred to me by Dr. W. E. Bates, of Davisville, on the 27th day of March, 1895. The following history was obtained from Dr. H. M. Kier, of Woodland, who was in attendance at the birth of the patient. Early in her history a slight enlargement over the parotid gland called attention to the fact that Steno's duct was congenitally absent. The subsequent history of the case was that of gradual enlargement, attended at times by severe pain. A small puncture had been made in the gland substance about a year before I saw the patient, and a considerable amount of glairy fluid escaped; the orifice reclosed, and, at the time of operation, there was a protuberance about the size of a hen's egg. The mass was irregular in shape, and contained several fluctuating points. I advised its removal, which was done on the 2d day of April, 1895, with the assistance of Drs. Bates, of Davisville; Kier, of Woodland, and Hanna, of Sacramento. The plan of operation was as follows: A 4-inch vertical incision, and a 3-inch horizontal incision was carried down to the parotid fascia. This being carefully exposed, an incision was made through it, encircling the entire tumor. The dissection was then proceeded with in the most careful manner. The inferior edges were freed from their attachments, and from this base of attack the dissection was carried around the entire mass. In proceeding, great care was taken to isolate nerve trunks, and to locate such important blood-vessels as the temporal, internal maxillary, and external carotid arteries. The preservation of nerve filaments is the one important step in this undertaking. Vessels were tied off whenever exposed, but branches of the facial nerve which traverse the gland in several directions, were carefully followed up and freed from gland involvement. During the later steps of the operation, the internal jugular vein, the internal carotid artery, and the pneumogastric and spinal accessory nerves were exposed. After a patient and tedious dissection, the mass was lifted from its attachments, and the wound was then closed in the usual manner. Time of operation, 1 hour and 40 minutes. The case proceeded rapidly to recovery. A few days later, Dr. Bates reported to me that there was paralysis of the muscles supplied by the temporo-facial and infra-orbital branches of the facial nerve. Feeling confident that these branches were left intact, I ventured the opinion that their function would be restored with the lapse of time, and advised the use of the faradic current. Under this treatment there was rapid improvement, and within the past ten days Dr. Bates reports the result as highly satisfactory. This operation has been done occasionally for many years, although surgeons have differed as to the propriety of attempting it. McClellan speaks of it as one of the most difficult and hazardous of surgical undertakings.

Sacramento, Cal. T. W. HUNTINGTON, M.D.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal.,
HENRY GIBBONS, JR., M.D., Professor of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal., and
WM. FITCH CHENEY, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

A Case of Superfetation.—DR. A. W. WHITE, Government Medical Officer at Trinidad, reports an interesting case of superfetation that occurred May 9, 1895. A female fetus, 6 inches long, was first delivered; from its size and appearance it was supposed to be about four months old. It was dark colored, like its mother. Soon after the removal of the placenta a full-formed, full term female infant, which had all the appearance of a "white man's child" was born.—*British Medical Journal*, July 6, 1895.

Rectal Injections in Labor.—A plea is made by J. R. IRWIN for routine administration of rectal injections in labor. His arguments in favor of the plan are, that the injections are indicated to remove a mechanical obstacle to the progress of labor; they prevent absorption of excretory matters into the blood; they prevent local contamination by fecal matter; they anticipate the necessity for transfusion of salines in case of hemorrhage; and, reflexly, they increase uterine action and accelerate delivery.—*North Carolina Medical Journal*, August 20, 1895.

No Germs in the Cervix.—The question as to the presence of microbes in different parts of the female genital canal, has been given much discussion of late. The latest investigations published are those of STROGANOFF, of St. Petersburg. After reviewing the work of other investigators and describing his own methods of experimenting, he reaches the following conclusions: (1) The cervical canal of women, whether pregnant or not, is, as a rule, sterile. (2) The external os is the boundary line between the territory invaded by germs and that free from invasion. (3) The cervical mucus destroys microörganisms.—*Centralblatt f. Gynäkologie*, September 21, 1895.

A New Treatment of Puerperal Sepsis.—The most modern treatment of general septicemia is that of hypodermic injections of creasote, recommended by FRANK, of Cologne, Germany. This method has been employed by Mehrtens, of Dusseldorf, in a case of puerperal sepsis, with remarkable results, the temperature falling from 104° F. to normal, after the injection of creasote. A rise on the next day to 104° was again brought down by the injection, and subsequent injections, three times a day, prevented its recurrence. Mehrtens used a solution of equal parts of creasote and camphorated oil, of which he injected 20 minims three times a day. None but good effects were observed.—*Charlotte Medical Journal*, August, 1895.

Management of Posterior Positions of the Occiput.—DR. CHAS. W. TOWNSEND, of Boston, reports two cases of occiput posterior position, where numerous attempts had been made to drag the head through the pelvis, but without avail. In one case the forceps had slipped repeatedly and the child's scalp was torn down to the bone. Townsend was able, in both cases, by introducing one hand into the vagina, to turn the head to an occiput anterior position. This was done by grasping and rotating the head with the hand in the vagina, while the shoulders and body of the child were turned at the same time with the other hand, placed externally. Then, while an assistant's hand externally held the head in the anterior position, axis traction forceps were applied and delivery speedily effected.—*Boston Medical and Surgical Journal*, August 1, 1895.

The Value of Ichthyol in Gynecology.—ELIZABETH M. CLARK, in a paper read before the Philadelphia Obstetrical Society, condemns the use of ichthyol in gynecology, after an experience of 18 months in testing it. She says that in a careful study of 50 cases, with different varieties of pelvic disease, there was not a single case in which she could be absolutely sure that the use of ichthyol alone was productive of marked benefit. In the discussion on Dr. Clark's paper, DR. J. M. BALDY said the statement made accorded with his own experience in the use of ichthyol—that no matter how applied or administered in gynecological practice, it is a superfluous and useless drug. DR. FRANK TALLY thought that much valuable time was often lost in treating pelvic disease by ichthyol, that no reliance could be placed on it and that it is a much overrated drug.—*American Gynecological and Obstetrical Journal*, October, 1895.

Laceration of the Cervix as a Cause of Cancer.—Cancer of the cervix is known to be intimately connected with the bearing of children or with miscarriages, and if the cancer be recognized before it has obliterated all the ordinary landmarks, there is frequently noticed more or less laceration of the cervix associated with it. It seems more than probable, therefore, that in the lacerated cervix, with infiltration and eversion of the lips, exists a direct prolific cause of cancer. In view of this probability, DR. HOWARD KELLY makes the following suggestions: (1) Within two or three months after each confinement, every woman should submit to a careful examination, and the exact condition of the cervix should be noted, particularly as to laceration, infiltration, and eversion of the lips. If the laceration exists, the condition should be treated either by puncture and depletory packs, or else the lips should be freshened up and the laceration should be united by means of sutures. (2) Every woman with a deeply lacerated and enlarged cervix, should be operated upon. (3) Every woman with a family history of cancer who presents a laceration of the cervix, no matter of how slight a grade, should present herself to a competent physician about every six months, in order that the cervix may be carefully inspected. (4) Every woman over 33 years of age, who has borne a child at any time during her life, should be advised to submit to an examination, and should be guided by the physician's statements about the condition of the cervix, as to whether it is advisable for her, even in the absence of symptoms, to present herself at stated intervals in the future for further examination.—*American Gynecological and Obstetrical Journal*, September, 1895.

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital Sacramento, Cal.,

G. F. SHIELS, M.D., C.M., F.R.C.S.E., Surgeon Post-Graduate Department University of California, San Francisco. and

GEO. B. SOMERS, M. D., San Francisco, Cal.

Appendicitis.—DR. MYLES F. PORTER draws the following conclusions, after discussing the treatment of appendicitis: (1) All cases do not require operation; on the contrary, some cases are best treated without operation. (2) In cases requiring operation, the appendix should be removed: (*a*) when there is no pus; (*b*) when an endo-appendiceal abscess is present; (*c*) as a rule, when there is a peri-appendiceal abscess that requires drainage through the general peritoneal cavity; and (*d*) when there is general peritonitis without adhesions, with the exception noted. (3) A simple incision should be made and drainage provided in cases with circumscribed abscess, when this can be done without opening the healthy peritoneal cavity. An exception should be made to this rule in cases in which the removal of the appendix will not add to the gravity of the operation.—*Medical News*, September 14, 1895.

Excision of the Rectum.—MR. FRANCIS T. HEUSTON says: "It is of importance that the peritoneal cavity be not opened; this may usually be attained by remembering that the peritoneum covers the anterior aspect of the rectum in the male to within 3 inches of the internal sphincter, while in the female you cannot be sure of more than 2 inches, although there may be much more in either case. At the posterior aspect of the bowel you can count on 4 or 5 inches. As a practical rule, I consider that if the surgeon can, by digital examination, reach above the malignant growth, the peritoneum is safe. The great objection to excision of the rectum by the usual operation, is the incontinence owing to the removal of the sphincter. The usual operation is commenced by an incision from the rectum to the coccyx; then incisions are made round the anus, meeting in front, the attachment of the levator ani to the rectum is cut, and the bowel with sphincters drawn down; then, most of the external sphincter and the entire of the internal sphincter is removed, and incontinence: often permanent, resulted. The operation I employ is commenced by an incision from the rectum to the coccyx, as in the former operation; the rectum is now separated from the surrounding cellular tissue, and clip forceps applied to the rectum at the commencement of the ampulla, below which the bowel is divided. The rectum being now completely divided above the internal sphincter, there is not much difficulty in drawing it downward and backward through the median incision. Clip forceps are now applied above the diseased portion, which is removed by scissors. The upper portion of the bowel is now fixed by deep sutures attaching it, about an inch above its cut extremity, to the recto-vesical fascia and levator ani muscle, thus closing the space between the levator ani and the peritoneum. In applying these sutures the mucous coat of the bowel should not be penetrated. A second row of sutures is now applied between the cut extremity of the bowel and that portion which had been originally left below; these sutures should penetrate the entire thickness of the bowel in both instances."—*Dublin Journal of Medical Science*, September, 1895.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

The Technique of Tenotomy of the Ocular Muscles.—DR. LEARTUS CONNOR has formulated the following rules to guide one in the performance of tenotomy of the ocular muscles: (1) A good physical condition of both operator and patient. (2) Perfect asepsis of operator, assistant, patient, instruments, and operating room, as called for by modern aseptic surgery. (3) A preliminary study and treatment of the eyes, sufficient to determine the exact degree of strabismus, the motility of the eye muscles, the elasticity of the opposing tissues, the kind and degree of ametropia, and the effect of its correction upon the strabismus. (4) A deliberate planning of the tenotomy so as to best correct the mechanical elements known to aid in producing or continuing the squint, the lack of power in the opposing muscles, and the elasticity of the tissues. (5) Such selection of instruments as will enable the operator to do the tenotomy with the smallest opening in the conjunctiva and tendinous sheath, and to divide the tendon subconjunctivally, close to the sclerotic insertion. (6) Cocain anesthesia to be employed in all cases, except in very rare ones, in which an idiosyncracy necesitates a general anesthetic. (7) In operating, a small horizontal opening is made with the scissors, in the conjunctiva and tendon sheath, directly over the center of the tendinous insertion; the remaining halves being divided, separately, to their utmost extremities, by successive clips of the scissors. This method least disturbs the lateral position of the tendon, as it slips back to its new attachment, and preserves intact all connections of the tendon which the operator does not desire to sever. (8) Double tenotomy is chosen in preference to a single one, with extensive severing of the muscular attachments. But, if this is insufficient, the attachments of the muscles may be divided, as is needed to produce the desired effect. If the operator still fails to secure the desired result, he may employ sutures to increase it. These should always be fastened to the superficial fibers of the sclerotic, and be attached to the commissure. In case of double tenotomy of the external, the sutures from either eye may be tied over the bridge of the nose, thus bringing the eyes into such a position as may be needed during their reättachment. Advancement of the weaker muscles is generally preferred to the use of such sutures. A slight degree of deviation can be corrected very satisfactorily by the use of Gould's method, applied immediately after the operation. This aids in securing binocular vision also. (9) If the immediate result of the tenotomy be too great, it is corrected by a conjunctival suture over the site of the tenotomy. (10) In tenotomy of the internal, the operator aims to leave a slight convergence, and a motility such that when the eyes are fixed upon the object at 7 inches, they will not diverge; in tenotomy of the external, there should be slight convergence; in tenotomy of the superior or inferior recti, there should be slight under correction at the first tenotomy, reserving for a second a finer adjustment of the optical axis. (11) When considerable sight remains in the squinting eye, binocular vision should be sought; and in securing this, the use of prisms affords an invaluable guide, both for operation and for estimating the result of a tenotomy. (12) No after-dressing is called for, but the eye should be protected from wind and dust by a shade, until the effects of the cocain have passed away. (13) Practically there is no danger connected with an ocular tenotomy, provided the operation be done antiseptically, the scissors used be sharp, blunt pointed, and able to cut clean to the ends, the light good, the operator in good working condition, with a distinct idea of each step of the operation, on the special case before him, and wound be protected from infection and unfavorable conditions.—*Ophthalmic Record*, September, 1895.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. Simmons, Jr., M.D., Sacramento, Cal.

Lactation and Syphilis.—Havas (*Centralbl. f. Gynäk.*) has published in a Hungarian medical journal an important communication on the moral and medical aspect of this question. He concludes that a syphilitic infant should be suckled by its mother, or, if she cannot secrete milk, by a syphilitic nurse, or, if there be no such wet nurse available, by artificial feeding. It is wrong and dangerous for a healthy nurse to suckle a child whose parents are syphilitic.—*British Medical Journal.* September 28, 1895.

Treatment of Gonorrhea in Women.—William R. Pryor, of New York, believes in the use of nitrate of silver to kill the gonococcus. For gonorrheal urethritis he recommends citrate of potash internally to alkalinize the urine, and local application of nitrate of silver solution, 10 grains to the ounce, every day at first, then 5 grains to the ounce every other day. For gonorrheal cystitis he uses large doses of benzoate of sodium internally, and washes out the bladder twice a day with a supersaturated solution of boracic acid, filling and emptying the bladder many times at each sitting. For gonorrheal vulvitis, he advises that every fold of the vulva, meatus urinarius, clitoris, and nymphæ be painted with a 20-grain to the ounce solution of nitrate of silver, every day or every other day, the woman bathing the parts meantime every 4 hours with a ½ per cent. lysol solution. For gonorrheal vaginitis, every part of the vaginal mucous membrane is to be painted with nitrate of silver, 20 or 30 grains to the ounce, and the vagina then packed with iodoform gauze, wrung out in a 1:5000 bichloride solution; repeat this application every two days. Gonorrheal endocervicitis is to be treated by applications of strong tincture of iodine every day, followed by packing the vagina with iodoform gauze; no caustics are permissible. For gonorrheal endometritis, Pryor advises thorough curetting, followed by packing the uterine cavity with gauze.—*American Gynecological and Obstetrical Journal*, September, 1895.

Obstruction of the Ejaculatory Ducts.—At the last meeting of the American Association of Genito-Urinary Surgeons. E. C. Burnett, of St. Louis, reported a case of early obstruction of the ejaculatory duct. The patient was an unmarried man, aged 35, who, at the age of five, was operated on for stone in the bladder, left lateral lithotomy being performed. The patient stated that his testicles almost always pained him for a day or so after sexual indulgence. Sexually, he stated that he was perfectly normal, excepting that he had never had an emission of semen. The external genitals were well developed. Upon the introduction of an endoscope into the urethra, the prostatic portion of the canal was found to be extraordinarily short, and the veru montanum was so small as to be barely distinguishable from the surrounding tissue. Palpation through the rectum for the seminal vesicles, disclosed the fact that they were not appreciable to the touch, and that the prostate was barely definable. During one of his examinations, Burnett noticed the scar on the left side of the perineum, and on inquiry he was informed of the lithotomy performed thirty years before. In this incident in the patient's early history lay the solution of the question as to the cause of his aspermatism. Obviously, in the performance of the operation, the ejaculatory ducts were torn across, becoming permanently occluded, and through the occlusion of these ducts, there followed arrest of development of the prostate gland and seminal vesicles. Obstruction of the ejaculatory ducts is given as one of the causes of atrophy of the seminal vesicles, but Burnett could find no reference to any such influence upon the prostate.—*British Medical Journal*, October 5, 1895.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Leguminous Alimentation in Diseases of Digestion and Nutrition.—BOVET refers to the apparent connection between richness in albumin, or the nitrogenous elements of plants, and organic phosphorous, these two seeming to run parallel. In the leguminosæ they are found in the greatest proportions. The consequence of the association of phosphates with albumin (vegetable) and the diffusibility of phosphoric acid, is that food of this character (leguminous) is very readily dissolved and digested in the alimentary canal, even in the absence of the usual ferments. The presence of a relatively large amount of potash salts in this food is also noted. A dog was fed for thirteen days on an exclusive died of legumine, a soup free from salt. An analysis of the gastric juice, before and after the experiment, showed a marked increase in hydrochloric acid and chlorine. A similar experiment on a patient, aged 42, suffering from chronic gastritis, slight dilatation of the stomach, weakness and emaciation, showed results comparable to the above. At the beginning the gastric juice, although highly acid, was free from hydrcchloric acid. At the end of two months, the total acidity was not increased, while hydrochloric acid was present in almost normal amount. Digestion, previously slow and painful, no longer inconvenienced the patient. Neurasthenia was lessened, and she slept eight hours daily without awakening. In this case, a certain amount of leguminous aliment was added to the otherwise unaltered ordinary diets. The author considers leguminous food suitable and valuable as aliment in cases similar to the one above described, and also in diabetes and obesity.—*British Medical Jonrnal*, August 10, 1895.

The Treatment of Diabetes Mellitus.—ROBIN describes, in detail, the medical treatment—"alternating treatment"—which he prescribes in diabetes. He believes that in this disease there is an increased activity of the chemical changes of general nutrition, and of the hepatic cells in particular, which is the results of increased activity of the nervous system. Hence he recommends drugs which diminish the activity of the mere general changes by acting primarily on the nervous system. The treatment is divided into three stages: (1) For four days, a powder containing about 15 grains of antipyrin and 8 grains of sodium bicarbonate, is given twice a day. In addition, codliver oil is taken twice a day with meals, and seignette salt as a morning purgative. (2) At the end of four or five days the antipyrin is discontinued for four days, and afterward taken again for six days. Before the morning and evening meals a cachet is recommended, containing arseniate of soda, carbonate of lithium, and codein. (3) After fifteen days these drugs are discontinued, and the author prescribes, for ten days, a pill containing opium, belladonna, and valerian. The codliver oil is discontinued, and the patient is allowed to drink a weak solution of bicarbonate of soda (1:125). In the case of nervous women, or if there should be intolerance of the opium and belladonna pills, 15 grains of potassium bromide are given two or three times a day, for eight days. In addition to the medical treatment, the diet is regulated. On account of the loss of inorganic salts in diabetes, the author recommends the food to be well salted; to supply potassium salts, he advises green vegetables, especially cabbage and endive, and also a weak solution of potassium tartarate to dilute the wine taken taken at meals, and to counteract the loss of phosphates of magnesium and calcium, he prescribes glycero-phosphates of lime and magnesia. He also recommends bouillon, on account of the inorganic salts which it contains, If sugar still be present in the urine, after the third stage of the medical treatment above mentioned, the course is recommenced. After a second course, whether sugar has disappeared or not, the drugs are discontined for one month. Robin has treated, by this alternating method, 100 cases of diabetes, in each of which the daily quantity of sugar excreted was 100 grammes or more. In 24 of these, recovery has occured; in 25, recovery is still doubtful; in 33, there has been considerable and permanent improvement; in 18, the results have been negative.—*British Medical Journal*, August 10, 1895.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

The Differential Diagnosis of Pain of Various Origin.—DR. LOUIS F. BISHOP concludes an interesting article on this subject as follows: The character of pain, although of some importance, is not of great diagnostic value, for the same quality and severity of pain may arise from various causes, and in different individuals the same cause varies almost indefinitely in producing pain. In questioning a structure to locate a disease, we examine it for tenderness of part or the whole of the structure. We test its function to ascertain whether it is impaired or carried on with pain. But structures have more than one function, and when we have indicted an organ we expect to convict it by the additional evidence of the impairment of other functions. Thus, in the pain of neuritis, we expect usually to find sensation impaired, where presided over by the affected nerve. The best diagnosis is always by exclusion. It is important to bear in mind, in the diagnosis of all painful affections, that neuritis may be the cause, or that a complicating neuritis may account for part of the symptoms. Most symptoms express themselves through the nervous system, hence the importance to the general practitioner of a knowledge of the peripheral nerves, as it is also necessary for him to appreciate the mental phenomena of the sick. To sum up the points we wish to make in the diagnosis of chronic indefinite painful affections of the extremities —we must approach them with an open mind, realizing that pain may have its origin in the nerve itself, in the tissue to which the nerve is supplied, or it may be of central origin. In our examinations, we must not only examine the joints and muscles, as a routine practice, but we must examine by palpation the nerve trunks. We must obtain accurate histories, because much light will be thrown upon the case by knowing whether the pain has remained stationary in one place or whether it has jumped from one spot to another. A stationary pain is strong evidence of neuritis. Again, we must study the distribution of the pain, as to whether it corresponds closely to the d'stribution of some particular nerve. A recent writer says: "Our tendency to classify cases, under various heads, will be, for the most part, inversely proportional to our clinical insight. The difficulty is not to see the resemblance between different classes of cases, but to stipulate the points which differentiate them. It is by this faculty alone that medicine has advanced."—*Journal of Nervous and Mental Diseases,* July, 1895.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

A Case of Periodic Paranoia.—The case reported by DR. USHENKO, of Russia, is the fourth one of this form of paranoia, so far published; the three cases previously reported were by Dagonet, Mendel, and Kansche. Ushenko's patient was a man of 35, married. The family history shows that the father was a crank and alcoholic; one brother a crank and women-hater, with only four fingers on one hand; another brother has a marked curvature of the spinal column. The patient is a pronounced masturbator. The first symptoms of mental disease were not noticed until after patient had suffered an injury to the head, followed by erysipelas, though it is probable that the disease began earlier. It developed gradually, the patient being at first unsociable and distrustful, afterward becoming suspicious seeing in everything sinister intentions toward himself. The suspicions gradually developed into typical delusions of persecution, to which delusions of greatness later added themselves. The persecuting ideas were more or less based upon gustatory, visual, and occasionally aural hallucinations. These symptoms, characteristic of paranoia (primäre Verrücktheit, délire systematise, systematized delusional insanity), alternated with periods of perfect mental lucidity. On admission to the Charkow Asylum, November, 1893, the patient is found to be cognizant of surroundings, except that he pretends that the actual designation of the asylum is to prepare its inhabitants, which, he says, are not patients, for prominent positions. A certain patient knows all his thoughts, by influencing him by means of electricity and magnetism. He is so absorbed in his own thoughts that the most common things escape his notice, while meaningless things excite his attention to a high degree. He thus anxiously and suspiciously watches the above patient rub his hands, which rubbing he thinks is the source of the power which magnetizes him. He thinks himself capable of doing great deeds, making great reforms, becoming emperor. He is subject to visual illusions, seeing peculiar and not existing expressions. Sometimes he tastes poison in his meals. He heard somebody once call, "Anti-Christ;" at another time, "What is form?" When the patient was admitted to the asylum he was in the midst of an attack, which had begun shortly before, and which lasted, altogether, six days. Then he had an interval of perfect lucidity, lasting about one week, which was followed by a second attack of about two weeks' duration. The following are the main characteristics of the case: (1) The alternation of the attacks with intervals of lucidity. (2) The similarity of successive attacks. (3) The short duration of the premonitory period to the attacks. (4) The perfect change in the personality at the time of the disease. (5) The full insight into his disease during lucid intervals. The author is of the opinion that periodic paranoia belongs to the psychoses of the degenerated, a characteristic of these phychoses being, that no matter how frequently they may occur in an individual, they seldom lead to dementia.—*Archives Psychiatry, Neurology, and Legal Medicine—Journal Nervous and Mental Diseases,* August, 1895.

FORMULÆ.

Sick Headache.—In some cases of sick headache, where the coal tar products alone, fail to relieve, this combination is often useful.—F. B. SUTLIFF.

Phenacetin	grs. 125.
Powdered acacia	qs
Elixir of guarana	ʒ ii—M.

S.—One teaspoonful every 2 or 3 hours until relieved.

Conjunctivitis.—In simple conjunctivitis I have found the following frequently useful—WM. ELLERY BRIGGS.

Zinci sulph.	grs. ii
Acid. borac.	grs. v
Aq. dest.	℥ i—M.

S.—Drop 3 or 4 drops into the eye each morning.

PUBLIC HEALTH.

BY W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for September, 1895.—The deaths registered in 59 town districts of the State, during the month of September, in a population of 738,573, correspond to an annual rate of 13.92 a thousand, the total mortality having been 858. 79 deaths were due to zymotic diseases, giving an annual rate of 1.20 a thousand. Of these, 4 were due to diphtheria, 25 to cholera infantum, 25 to typhoid fever, 7 to diarrhea and dysentery, 6 to cerebro-spinal fever, 3 to whooping cough, 7 to croup, 2 to intermittent and remittent fevers, 0 to scarlet fever, 0 to measles, and 0 to small-pox. 192 deaths resulted from diseases of the respiratory organs, giving an annual rate of 3.12 a thousand. Of these, 122 were due to consumption, 38 to pneumonia, 28 to bronchitis, and 4 to pulmonary congestion; the rate being, for consumption and pneumonia, 1.92 and .62, respectively. 89 deaths resulted from diseases of the heart, 5 from alcoholism, 3 from erysipelas, 45 from cancer, and 385 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 593,000, was 13.28. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Alameda.

METEOROLOGY.

Summary for September.—*Temperature.*—The normal temperature of the State for September is 69.8°; the average for September, 1895, was 65.1°, a departure from normal of - 4.7°. The highest monthly mean was 92°, at Palm Springs, in the desert regions; the lowest, 47°, at Bodie, in the mountain regions. The maximum temperature was 115°, at Volcano Springs, in the desert regions. The minimum, 6°, at Bodie, on the 22d. The greatest monthly range was 72°, at Bodie; the least, 26°, at Hotel Del Coronado and Point Lobos. The absolute monthly range for the State was 109°.

Rainfall.—The normal precipitation for the State for September is 0.21 inches; the average for September, 1895, was 1.44 inches, a departure from the normal of + 1.23 inches. The greatest monthly precipitation was 9.57 inches, at Upper Mattole. The least, nothing, at a few stations in the southern portion of the State. This is the heaviest rainfall on record in any September.

Wind.—The prevailing direction of the wind was from the west.

Unusual Features.—The unusual meteorological feature of the month was the phenomenal precipitation, exceeding that recorded for any September in this State. Thunder and lightning occurred at several points in the State, from the 17th to the 30th. Frost occurred at many stations, ice being reported on the 21st, at La Porte.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for September, 1895.

STATIONS.		TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
		Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn	Cal.	----	----	----	----	----	----	----	----	----	----	----	----	----	Southern Pacific Company.
Berkeley	"	58.2	87	50 0	69 0	54.0	15.0	3	1.28	80 0	19	4	7	S.E.	Obs. University of California.
Colfax	"	64.1	98	45 0	----	----	----	----	2.29	----	----	----	----	N.E.	Southern Pacific Company.
Coronado	"	68 0	84	58.0	73.0	62.0	11.0	1	0 01	----	27	2	1	N.W.	Hotel del Coronado.
Eureka	"	54 0	70	36.0	60.0	47.0	13 0	4	3.14	89.0	10	15	5	W.NW.	Weather Bureau Dept. Agr.
Fresno	"	70.0	97	44.0	86 0	54 0	32.0	2	0.07	43.0	24	4	2	W.	" " "
Independence	"	68.0	92	34.0	84.0	52.0	32.0	1	T	22.0	21	5	4	N.W.	" " "
Los Angeles	"	69.0	92	48.0	83.0	55.0	28 0	1	T	68.0	12	17	1	W.	" " "
Monterey	"	62.4	88	46.0	----	----	----	----	0.00	----	----	----	----	S.	Southern Pacific Company.
Napa	"	65.0	90	49.0	76.0	55 0	41.0	4	1.16	68.0	16	9	5	S.W.	Station Napa Insane Asylum.
Oakland	"	59.0	86	49.0	70.0	53.0	17.0	4	1.07	79.0	18	4	8	N.W.	Chabot Observatory.
Paso Robles	"	64.0	91	33.0	81.0	46.0	35.0	0	0 00	55 0	26	4	0	W.	Southern Pacific Company.
Red Bluff	"	68 0	97	48.0	81.0	56.0	25.0	4	1.76	51 0	23	3	4	S.E.	Weather Bureau Dept. Agr.
Sacramento.	"	67.0	95	46.0	80.0	54.0	26.0	4	1.26	61.0	25	1	4	S.W.	" " "
San Bernardino	"	69.8	99	42.0	89.0	50.0	39.0	0	0.00	----	24	5	1	W.	A. K. Johnson, M. D
San Diego	"	68.0	90	54.0	75.0	60.0	15.0	1	0.01	72.0	27	2	1	N.W.	Weather Bureau Dept. Agr.
San Francisco	"	61.0	89	51.0	67.0	54.0	13.0	4	0.77	77 0	17	6	7	W.	" " "
Santa Barbara	"	65.6	86	48.0	76.0	55.0	21.0	0	0.00	70.0	23	4	3	W.	Hugh D. Vail.
Santa Cruz	"	64.2	93	43.0	78.0	51.0	27.0	1	0.18	----	27	0	3	W.	W. R. Springer.
Yuma	A. T.	84.0	107	58.0	100.0	68.0	32.0	1	T	40.0	23	7	0	W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: NOVEMBER, 1895.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

An average attendance of thirty members and a maximum of thirty-seven persons present at one time, during the afternoon session, places the fifth annual meeting of the California Northern District Medical Society at the head of all that have been held so far. The attendance was good throughout; in fact, there have been many sessions of the State Soctety at which fewer persons were present. The papers were fair, quite up to the average of medical society meetings, and the discussions were unusually good. As will be seen by our stenographic report, the liveliest interest was taken in this feature of the meeting, and there were no dull times at any of the sessions.

PRESIDENT LAWHEAD's address shows that scientific work need not be confined to the practitioner of the cities, and that in the country men can find time, in an extensive practice, to take up special lines of investigation. It has been well said that original investigation is the key to scientific advancement in medicine. One original observation is far more valuable than the laborious collation of facts already recorded. Work of this kind is excellent mental discipline, useful in the marshalling of facts for diagnostic and therapeutic purposes, and even more so by training the faculties so that the mental record of experience can be sufficiently orderly to be drawn upon in the future. As DR. E. B. ROBERTSON said, during the discussion on his paper, there is no reason or excuse for the physician practising in the country to be an ignoramus or to retrograde in his professional knowledge. On the contrary, with a large and varied experience, he needs only a daily hour of study and some familiarity with current medical literature to keep him well abreast of the times. The District Society is doing a great work by bringing men who practise in the country districts together, and by demonstrating that in an effort to help others will be found the best road to self help.

Red Bluff, almost on the confines of its territory, has been selected for the next meeting of the Society. This opens up a field for missionary work in a section from which the membership has, so far, been limited, and in which there is plenty of good material. The election of DR. A. W. HOISHOLT is a well-deserved compliment to his services in connection with the Stockton meeting, and it will devolve upon the new President to see that San Joaquin county has a better representation in the Society than it now affords.

In accordance with custom, a banquet was tendered to the visitors by the Sacramento Society for Medical Improvement, at the Maison Faure. This feature of the meeting presented a marked distinction from many of its class, in being an exceedingly interesting occasion. By setting the hour early, a large attendance was obtained, most of the guests being enabled to remain until the close. The after-dinner speaking was far above the average, and while the lighter refreshments were liberally appreciated, they were not abused. It may be well here to sound a note of warning regarding these entertainments. The Society has shown its intention of visiting every town in its territory. In several of these the medical population is small, and as the attendance at the meetings will increase with the growth of the Society, any entertainment except of a very modest character will be a heavy tax on the local profession. It is well, therefore, to recognize that social features, while enjoyable, are not an integral part of the meeting, and that the Society desires far more to be heartily welcomed than to be elaborately entertained.

THE RECENT QUARANTINE AT SAN FRANCISCO AGAINST CHOLERA.

Much has been said and done in San Francisco, during the last two months, about cholera. The ports of China, Japan, and the Hawaiian Islands, were declared infected, and active quarantine measures taken against them. While granting the terrible nature of this disease, it must be conceded that it is quite a serious matter to declare a port infected, unless this action is based on accurate and reliable information. Quarantine measures paralyze trade and travel, and cause widespread loss and inconvenience.

The recent action of the San Francisco Board of Health seems to have been prompted largely by numerous newspaper articles, some of which were grossly incorrect. The only means that the health authorities have of getting reliable information regarding the condition of a port, is through the papers of a ship recently from that port. The ship's papers give official statements as to the health of the various ports touched at. Furthermore, on passenger steamers, the surgeon's report will show the health of the ship during the voyage. The Quarantine Officer has access to these papers, and being familiar with all facts, is the only person competent to judge of the necessity of ordering a ship into quarantine, or of declaring a general quarantine. If the Board of Health refuses the Quarantine Officer discretionary powers in these matters, it is equivalent to expressing lack of confidence in him. In the recent controversy between QUARANTINE OFFICER CHALMERS and MAYOR SUTRO, DR. CHALMERS seems to have acted wisely, and he received the support of the United States quarantine officials. The Mayor's action in filing a complaint against DR. CHALMERS before the Grand Jury, for allowing the "Australia" to dock, without first consulting the Board of Health, was entirely uncalled for.

Some of the conditions governing cholera in Japan and China are as follows: The disease is endemic in these countries. It very rarely attacks Europeans, and then only when they fail to take the simplest sanitary precautions, or when they live in the same unsanitary manner as the Japanese, eating raw food and drinking bad water. European and American travelers think nothing of the dangers of cholera, and pass through infected districts with impunity. In Hong Kong there has been, during the past year, practically no cholera. At other Chinese ports more or less cases have occurred, and from them the returning Japanese troops brought the disease into Japan.

There the conditions are more favorable for the spread of the disease, owing, principally, to the peculiar disposition of human excreta. In the whole of Japan, from the outbreak of the disease up to the last report, dated September 21, 45,607 cases occurred, with 30,842 deaths. Of the deaths, not more than 5 or 6 were of whites. On the other hand, the Japanese quarantine service is complete and efficient. It consists of a daily house to house visitation, in all infected districts, the copious use of disinfectants, and the quarantining of one Japanese port against another. The quarantine stations are perfectly equipped and would put to shame the majority of the quarantine stations in the United States.

The following is an official statement of the outbreak of cholera in the Sandwich Islands, by DR. WM. O. SMITH, President of the

Hawaiian Board of Health: "The first defined case of Asiatic cholera appeared at Irvilei, in the suburbs of Honolulu, on the 18th of August. Between that date and the 18th of September there were in all 85 cases. Since the 18th of September there have been but 2 cases, one on September 27th, and one on the 28th. Since the 28th no new case has appeared. Of the 87 cases, 52 were reported soon after being taken sick, 19 when dying, and 16 after death. In all there were 62 deaths. The nationalities of those affected with cholera were: 76 Hawaiians, 4 part Hawaiians, 3 Americans, 2 Portugese, 1 Chinese, and 1 Japanese. Efficient measures were promptly enforced, and the progress of the demon arrested. Since the 18th of September there has been no epidemic, the two cases since that time being simply sporadic cases, which originated in well known and forbidden sources of infection; and so far no contagion has been carried by these cases. The disease is believed to have been brought from Japan by passengers on the steamship 'Belgic,' which arrived here August 9th."

NOTES.

Suicide of a Patient at the Stockton Asylum.

The following are the facts in connection with the suicide of a patient named Edward Bennett, who had been an inmate of the asylum at Stockton for the past three years. He was admitted to the asylum May 31, 1892, presenting symptoms of a disseminated sclerosis, coupled with those of a mild mania. Most of the time during his detention he had been an inmate of the invalid ward, on account of the muscular incoördination present. At no time had he shown any suicidal inclination, but on the contrary, on a number of occasions he had been violent. Some weeks ago he had left his bed in the night and struck another patient; for that reason, one of his wrists was confined by a strap to the edge of the bed, in such a way as not to interfere with his movements in the bed, but to prevent him from leaving it. On the night of the 18th of September, he managed to divide the strap, and, using it and some clothing as a noose, he tied this to the top of the inside wooden window bar over his bed. He then got up on the bed, and, kneeling, strangled himself. The night watchman examined the room at 3:30 A. M., and found everything quiet; when he called again, at 4:45, he found the man dead.

Alleged Negligence of Officials at the Quarantine Station, Angel Island.

During the recent cholera scare, and while quarantine was being enforced at San Francisco against infected ports, it was alleged in the daily papers that in the disinfection of passengers of the China steamer "Rio de Janeiro," gross negligence was shown. Now that we are once more safe, and as the alarm of the public has died out, a brief statement of the facts can be made in explanation. The following statement by a steerage passenger, named Cahill, represents the basis for the charges of negligence: "We [the steerage passengers] were taken ashore and escorted to a barn filled with hay. Then the attendants brought in four great round tubs filled with a solution of carbolic acid, and told us to take a bath. Mr. Dubois and I bathed as best we could under the circumstances. Barely had we got undressed, when in came the Chinese passengers, almost walking over each other in their haste to get through with the job. They threw off their dirty old duds right where we were standing. It was a most disgusting sight to a white man, and it was an outrage to subject us to the association. No attendants remained in the barn, and the Chinese washed themselves about the neck only, just to show up clean when they had their clothes on. The Japanese did not wet even their fingers in the wash." The truth of the matter is, that all the passengers, including, of course, those in the steerage, were taken from the steamer to the quarantine station. Here their clothing was disinfected by exposing it to dry heat at a temperature of 230° F., for half an hour. Shoes and leather trunks were disinfected with SO_2. Every passenger took a bath, the steward and two attendants were with them all the time, to see that it was properly done. The man Cahill, who made the complaint to the papers was, at the time, exceedingly angry because the Captain of the steamer would not allow him to go ashore with the cabin passengers, though he had been in the steerage during the entire voyage. While all the necessary precautions were carried out, it is true that the facilities for bathing at the station are not what they should be. This, however, will soon be remedied, as a bath house, 117 feet long, is now under construction, that, when finished, will be able to accommodate any number of passengers that are likely to be brought to San Francisco, by vessels in the carrying trade of that port.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, September 18, 1895.

The President, C. B. NICHOLS, M.D., in the Chair.

New Members.—STEPHEN CLEARY, M.D., and H. E. WRIGHT, M. D., were duly elected members of the Society.

California Northern District Medical Society.—DR. J. H. PARKINSON, Chairman of the Joint Committee of Arrangements, reported that it had been decided to hold a morning and afternoon session only, and to devote the evening to a banquet. This, if held at an early hour, would enable all the visitors to return to their homes by the late trains. The Committee was authorized to obtain subscriptions to the banquet fund.

Hypertrophy of the Stomach.—DR. D'ARCY POWER reported a case of hypertrophy of the stomach. The patient had for some time past suffered from dyspepsia, but until very lately had had but little pain. During the last two months he had been profoundly anemic and presented all the symptoms of malignant disease. There was fluid in the abdominal cavity. An examination under ether was made, and, as a tumor in the epigastrium was found, the diagnosis of gastric cancer was formed. The patient died two days after this examination. At the autopsy a large, white tumor was found occupying the epigastrium, which, upon examination, proved to be a greatly hypertrophied stomach.

DR. T. W. HUNTINGTON: The case is an interesting one to me. When he was brought to the hospital his condition was attracting especial attention by the constant pain in the abdomen and its distended condition. The man, when in health, only weighing 135 pounds, the abdomen stood out like the top of a metallic dish, with no apparent cause for distension. I remarked almost at the outset, that the case was one, probably, of poor circulation, whether from cancer or some other cause. I then gave it close attention, and become satisfied that he was the subject of croupous enteritis or peritonitis, and the treatment was directed toward that. The ingestion of food was limited, and the process of digestion very much impaired from the start. Under ether, we examined the stomach carefully and I confess that I was thoroughly satisfied that it was malignant, and so registered the case upon the books.

Eczema.—DR. H. H. LOOK read a paper upon this subject. He said the field of dermatology was one that was too often neglected by the medical student, and subsequently by the physician. The practitioner was often confronted with skin diseases with which he was not familiar, and after an unsuccessful attempt to treat them they were dismissed as incurable. In this country, where the vast majority of people are properly fed, sheltered, and clothed, there are few cases in which treatment should not yield the happiest results. This demands a close study of the patient and his environment, as well as of the character of the lesion. By carefully observing these, the rest is an easy matter. He had found names of little use in dealing with skin diseases, and paid but little attention to them, choosing rather to familiarize himself with the pathology of the disease. Etiology, pathology, and symptomatology follow each other in regular succession, and the discovery of one often leads to the others. Eczema was the skin lesion which we were called upon, most often, to treat. It is the most irregular, persistent, and at the same time, puzzling of the simpler forms of disease that invaded the cutaneous tissues. Ordinarily, it presents but little difficulty in its recognition. The speaker then discussed the various diseases with which eczema might be confounded, pointing out the differential diagnosis in each case. Regarding the symptomatology, he emphasized the point that eczema is an acute, subacute, and chronic inflammation of the skin, partaking of the nature of the tissues involved, and always to be traced to a mechanical or chemical irritation, or to malnutrition, which rendered the skin susceptible to internal and external influences. Bearing this in mind, and that the disease always itched, one will rarely make a mistake in diagnosis. It was the treatment that alone taxed the skill of the physician. No other disease, perhaps, requires more close study than eczema; no detail, however trivial, can be neglected. On the other hand, with a proper understanding of the case and an intelligent and obedient patient, success may be considered as secured. Taking up first the local applications, these are multitudinous. It was, however, only necessary to mention a few, as, if these failed, those of lesser efficiency could hardly succeed. Water should, at all times, be dispensed with. Here, and here only, is cleanliness not next to godliness. All irritation must cease. The clothing must be regulated to maintain an even temperature of the surface and at the same time must be of a non-irritating character. The local applications that he had found best in the greatest variety of cases was tar. He rarely gave it alone, but in conjunction with green soap, alcohol, or anything else that the case might demand. In old chronic cases, with considerable infiltration, he used less of the tar and more of the soap, alternating these with the pure soap well rubbed over the infiltrated surface. Its caustic and stimulating effect was good; the tar usually allays the itching at once, a result which, more than anything else, encourages the patient. That once stopped, the case goes on to recovery without any trouble. Sometimes an alcohol bath will help the affected part, but its effect is not lasting. Oil of cade is used for the same purpose as tar, but he had not found it so satisfactory. Next among the local applications was mercury, in the ammoniated form, a 10 per cent. ointment of lanoline or vasaline was what he generally employed. Calomel in ointment, or as a powder, acts nicely. He generally employed this about the face after one or two applications of tar, as they were easier to use and not so offensive. The internal treatment of these cases required the greatest skill. No two patients could be treated alike, and it was often a matter of experiment to discover the proper thing. Arsenic stands first in the list of remedies, though it often fails. Digestive disturbance and errors in diet must be corrected, while proper exercise and sleep, and other matters of personal hygiene, must be attended to. General tonic treatment was then demanded. The iodides and mercurial preparations have given results where other things have failed. The syrup of hydriodic acid had proved most satisfactory amongst the iodides. He had also used bromide of gold and arsenic with good results. These remedies had not been used hap-hazard, but had been taken up in the regular way, only to be abandoned when unsuccessful. The drug most suitable for the individual case was determined in this way, though this knowledge or experience did not prove of much value in a subsequent case.

Dr. G. C. Simmons, in opening the discussion, said he differed from the author in regard to confounding eczema with other diseases. He would modify the statement somewhat, by defining whether the disease was produced by scratching, as irritation of this kind could not always be regarded as eczema. As to the treatment the author had spoken of, this was more particularly with reference to the chronic stage. He was correct in saying that water was not to be used in the chronic form, but in the acute form water is very soothing. Sex has some influence on the prevalence of the disease, males being more liable than females, perhaps on account of their occupation. In early life, teething always aggravates eczema. Summer heat was a causative agent, owing to the hyperemia of the skin, which it produces. Certain occupations also tend to produce the disease, as printers who use colors, hod-carriers from contact with mortar, and bar tenders who have their hands in beer slops. Vaccination has been assigned as a cause, but with pure vaccine this could not be the case. The absence of eczema in asthmatic patients had been noticed, and it was possible that this class of patients were immune to the disease. Regarding the causative influence of foods, considerable doubt had been expressed by many authors. Oat meal and fish were amongst those regarded with suspicion, but eczema was by no means common in Norway or Lapland, where fish is a very general article of diet.

Dr. T. W. Huntington: I have a case of universal eczema, and it is a case that will not only keep the patient busy, but it will keep the doctor busy all the time. This man has consulted specialists on the skin; he has been treated by every succeeding House Officer, and I have exhausted my ingenuity upon him. The case is an incurable one, and the best that we can do is to keep him comfortable. I wish to take very strong grounds against the objection with regard to water in chronic eczema. Certainly, I do not think in this case there is an exception to the old saying that "cleanliness is next to godliness." In my opinion, there is no instance in which the use of water and soap will give you such benefit as in the treatment of that disease. I believe that we have very good authority to the contrary. It is not the water, but the scrubbing and the use of other things in conjunction with water, scrubbing brushes, etc. I have been treating eczema for twenty years, and have cured almost every case. I have never seen a case that gave me very much trouble. I have a little annoyance in my own person, upon my toes, and I can certainly testify that the absence of water is criminal. I am certain that I can produce eczema of the feet in twenty-four hours with a scrubbing brush and soap. My idea with regard to the treatment ot chronic eczema is cleanliness, with tar soap, using very little friction, every three or four days; the moist pack if neceasary, using in conjunction with water, boracic acid, at the same time rendering it as aseptic as possible. Zinc ointment, if made aseptible, is good. I shall continue to use water, avoiding all irritants, which I believe to be most vicious in these cases. Permit me to add further that anal eczema, a most persistant and annoying form of this disease, usually depends upon annal fissure or rectal ulcer. The cure here depends upon the removal of the cause. I have frequently had opportunities for demonstrating this statement, and I am always in the habit of searching for one of these lesions where anal eczema is present.

Dr. C. E. Fowler: I think, in the preliminary treatment, I would poultice, to get rid of the scabs, then stop the use of water, and keep down the local inflammation.

Dr. W. A. Briggs: In the first place, I must differ with the author. We must make as careful a diagnosis in eczema as in any other disease, and none of us have the time to make an independent diagnosis of the etiology, pathology and treatment. In the second place, I shall differ from him in regard to the use of water, and in regard to cleanliness being next to godliness. I think water is injurious from this fact, that the secretion from eczema is an irritating secretion. While, as a rule, I insist upon dryness of these parts, I insist upon cleanliness, because if the moist secretion of eczema is allowed to accumulate, it spreads, and I believe eczema, under certain conditions, is contagious, and that the secretion carries with it a germ, and communicates it to other parts. My hope in these cases is, as a rule, to insist upon dryness of the surfaces. Insist upon cleanliness; use water once a day for that purpose. I presume the author, in his paper, in regard to the treatment of this disease, was referring chiefly to chronic cases. I believe zinc ointment is most frequently used in these cases. I have used tar ointment, and have found great benefit from it. If the itching is very annoying, carbolic tar is useful in controlling that element. To relieve itching, cocain is also useful, and menthol is good in some instances. Hot water, at a temperature of 115° F. or even as hot as it can be borne, will give great relief in these cases, and without untoward effect, as far as I have been able to observe. As for the general treatment, I think it is very important, but I think arsenic is not as useful as it may appear. I must confess I do not use it except in chronic cases. The digestive process should be regulated, and the general nutrition looked to in every possible way.

Dr. G. L. Simmons: I have found the greatest benefit in these cases by treating them so as to improve the general health, and do not handle the parts very much. Since icthyol has been put upon the market I have used it a great deal. I am sure that our main treatment in chronic cases of eczema should be connected with nutrition in the various parts of the body.

Dr. F. B. Sutliff: I have seen very good effects following local applications, but at the same time, I do not like to give up the iodides. I think that the parts should be kept clean, and the general health looked to. As eczema of the palms is one of the worst forms, I always advise keeping the hands out of dish-water, wearing rubber gloves, etc.

Dr. D'Arcy Power: Those who are employed in handling sugar in warehouses are very often affected with the disease. We find eczema of the hands in persons who tend bar. Balsam of Peru is very beneficial in eczema due to scabies, by covering up the burrows of the insect without increasing the eczema. In most cases I have had very good results from a solution of sulphate of zinc. I have had eczema of the head dry up in forty-eight hours. When there is a considerable amount of crusting or thickening I have always used hot water. These cases, I am sure, are kept up more by the constant irritation of scratching than by anything else. You must keep their hands away and put the children into a bath of hot water, with which I use a certain amount of liquor carbonis detergen, and they get well. If the cases are irritable I do not use so much tar, one-fourth of tar being considered about right. In cases of thickening I believe in using something to stimulate the skin, such as chrysophanic acid, or nitrate of mercury, to produce inflammatory action. I believe in the use of water, but do not scrub.

DR. F. GUNDRUM: Dr. Simmons, in opening the discussion, referred to the exciting causes of eczema, but did not refer to the real and true cause. What is it? Opinion seems to be divided as to whether it is due to a germ, or a chemical agent, or whether it is a neurosis. That the nervous system has a good deal to do with eczema there is no question. We find that shocks to the nervous system, bad news, attacks of asthma, will bring on eczema in a few hours. It is true that eczema occurs more in the male than in the female; most writers give the ratio as one to two. I have had cases that almost drove the patients crazy. I remember the case of a child that had eczema of the head, face and neck, and I failed for a long time to give her any relief. It was the most distressing case I ever saw. Finally I made a hood of oiled silk and covered the head, face and neck, making a hole to breathe through, and kept it on for six weeks, and controlled the inflammation in that way. I must say that in that case water was poisonous. If we put on warm water the child would scream as if on fire. In some of the cases itching of the skin is so acute that we must find relief in some way. I find tartar emetic, with some diuretic, is often beneficial, and if that does not relieve, give opium to procure rest and sleep. As to the use of water, I think Dr. Huntington is right, and that the other gentlemen are right. By keeping the parts aseptic we can keep them clean without the use of water; but there are cases in the chronic stage that will stand water all right.

DR. LOOK, in replying, said: I spoke of cleanliness not being next to godliness, which, in the majority of cases that I have seen, is true. The parts should be made clean, but not with water. Hot water without rubbing is good in cases of extreme infiltration. Hot water with massage and green soap will produce good results. In speaking of dryness, absolute dryness, in my experience, is necessary; but in the weeping form of eczema it is very difficult to produce dryness. Zinc ointment and tar ointment will be washed off. Speaking of internal treatments, of course we have arsenic, it is true. What has been brought out in the discussion about attending to the nutrition of the patient in general, and particularly of the skin, is necessary to obtain results. In the acute form I find tar as useful as in the chronic. I have had one case in particular here that is certainly very curious. The patient had been under the care of five physicians, four of them in Sacramento and one in Stockton. He had had this attack for two weeks, and had not slept a wink during the whole time. The trouble was acute. The physicians claimed to have tried everything, at last resorting to cocain. He was bathed in hot water, lead lotion, zinc and everything. I put that man upon a solution of liquid tar alcohol and green soap, prohibiting water, and he slept all night, after the first application, being entirely free from irritation.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, September 10, 1895.

First Vice-President, C. G. KUHLMAN, M.D., in the Chair.

New Members.—MARY E. MORRISON, M.D., and A. K. HAPPERSBERGER, M.D., were duly elected members of the Society.

Grave's or Basedow's Disease.—DR. J. ROSENSTIRN presented a case [patient exhibited] of this disease, with the following history: Two years ago the speaker had noticed the patient, while attending a member of her family. At that time he had warned her of the seriousness of her case, but she had disregarded his advice. One year later she came to him in a bad condition. She was highly nervous, and had lost twenty pounds in weight, weighing at that time only eighty pounds. She was unable to continue her occupation as a school-teacher. The speaker, soon after, injected a 5 per cent. solution of carbolic acid into the tissues of the thyroid gland, and with benefit, so that she was able to leave the city for the mountains, remaining at an elevation of about 5,000 feet, as highly recommended by some authorities. There was a marked improvement, and the patient remained away for four or five months. Later on, she returned to San Francisco, and was again treated for some time, after which she left for the mountains, remaining at Lake Tahoe. When she returned, she was much improved, having gained twenty pounds in weight. In this case, all the classic symptoms were well marked. The local enlargement, disturbed circulation, quick pulse and exophthalmos were very apparent. Graefe's symptom was very well marked, the upper lid not following the bulbus, but leaving a space of sclera between the cornea and the lid. For a long time it was thought that the nervous system, that is, the sympathetic, was responsible for the symptoms. Ehrenberg and Guttman, who have spent much time investigating the etiology of the disease, have demonstrated that both the thyroid gland and the sympathetic nerve were responsible for the symptoms, that is to say, either both, or one through the other. The irritation of the sympathetic acts on the thyroid, and the auto-intoxication of the secretion of the thyroid produces some of the symptoms. Other nervous disturbances are caused by the overflow of the thyroid juice. Experiments of other investigators tend to support this hypothesis. It has been shown that the irritation of the sympathetic in the cervical region will cause the thyroid to enlarge and become hyperemic to a marked degree. In one of the operations performed by Mickulicz, in this disease, there was no swelling of the thyroid, but a large sub-mental lymphadenoma, which pressed on the cervical ganglion of the sympathetic. After its extirpation, these symptoms disappeared. This case supports the sympathetic origin of the disease. The therapy of the disease includes electricity, iron, arsenic and climatic treatment, at high elevations. Many cases improve, but those of the graver type do not show much change. During the last few years, efforts have been made to cure the disease by surgical interference, removing the gland entirely or in part, or ligating the thyroid artery. These measures have been more or less successful, as any effort to reduce the size of the gland improves the case. In some cases, the exophthalmos and thyroid swelling may be absent, but the circulatory and nerve symptoms are always present. At the last Surgical Congress, Mickulicz reported eleven operations, with a comparative cure in six. The period that had elapsed since operation varied from one to nine and a half years. Of the remaining cases, five in number, four were markedly improved, and had been under observation from two to twelve months. The other did not show much improvement. These cases were all severe, exhibiting the usual symptoms. A remarkable feature is that the improvement may not follow the operation immediately. Months, or one or two years, may be required for a complete cure of all symptoms. The nerve symptoms are the first to improve, then the circulatory symptoms, and lastly the exophthalmos. Mickulicz ligates the four thyroid arteries in one sitting. Trendelenberg does the operation in two sittings, taking one side first. He claims that the shock is too great when the four arteries are tied at one operation. Shock does sometimes occur during the ligation, but it is not so severe as when extirpation is performed. Thyroid feeding has recently been put forward. Marked improvement follow its use in these cases, and in myxedema. The speaker could not see that any advantage had resulted from it in his case. From a clinical standpoint, he thought that ligation of the thyroid arteries promised the best results.

Dispensary and Hospital Abuses.—DR. C. G. KUHLMAN, with a view of bringing this subject before the Society, submitted the following preamble and resolutions:

Whereas, certain evils exist in this city and county, such as Hospital Associations, Lodge Medical Systems and so-called Polyclinics, inspired by and maintaining certain members of this Society, whereby people amply able to pay the fees or honorarium established by this Society, are daily receiving medical treatment gratis, or at the cost of from $1 per month to $1 per annum.

Therefore, it is hereby resolved that such practices, on the part of members of this Society, constitute an offense against the Code of Ethics of the American Medical Association, and the established rules of this Society, and not only operate to deprive a majority of the members of this Society, who are honestly and conscientiously engaged in the practice of medicine, of the necessary means whereby to provide themselves and their families with the necessaries of life, but also operate to lower the dignity of the profession;

Resolved, that a copy of these resolutions be forwarded to every medical society in this city and county, requesting that they adopt the same.

After considerable discussion, the resolutions were referred to the Committee on Medical Ethics, with instructions to report at the next meeting.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, September 2, 1895.

C. N. ELLINWOOD, M.D., in the Chair.

New Member.—A. B. MCKEE, M.D., was duly elected a member of the Society.

DR. CLINTON CUSHING read a paper entitled "Some Forms of Uterine Hemorrhage." [Published at p. 645.]

DR. HENRY GIBBONS said that his experience with uterine hemorrhage had been chiefly in connection with childbirth. He agreed with the speaker as to the importance of undue hemorrhage or unusual length of time of bleeding. Hemorrhage occurs in childbirth usually under favorable opportunities for observation, but sometimes hemorrhage precedes labor, or follows it as secondary hemorrhage. A lady, 3 days after labor, was taken with severe hemorrhage. He found her blanched and exhausted, with a pulse of 120 to 140. The placenta had been removed entire, and the cause for the hemorrhage could not be ascertained, though the patient had been suddenly startled by the arrival of her husband from sea. Clots were removed, an alum plug inserted, and ice applied to the abdomen. Bleeding ceased, but the fundus rose a little, though there was no external hemorrhage. Pulse was steady at first, but then increased to 160, but was not very thready. The question was: Is there internal hemorrhage, or is the condition due to the nervous excitement over the return of her husband? It was decided not to interfere at once, and by night the pulse had fallen to 120, and no dangerous symptoms were present. Four nights after, the speaker was again called in for a recurrance of the hemorrhage. It was arrested and there was no further trouble. No origin for the bleeding could be discovered. He believed secondary hemorrhage to occur in about 1 in 500 cases of labor. He had recently seen an interesting case of *prepartum* hemorrhage. The woman was in the seventh month of pregnancy, when a severe hemorrhage occurred. Patient was confined to bed, but no treatment instituted till two weeks after, when the hemorrhage recurred and a tampon was used. Several recurrences took place in the next few weeks, but were not severe. He was not alarmed about the case, and let things take their natural course for several weeks. At that time a sudden hemorrhage occurred, lasting not more than 10 minutes, but completely exsanguinating the woman. He found the patient still flowing and in profound collapse. The os was dilated ¾ in.; placenta previa was suspected, but this condition was not made out. He did not try to deliver at once, because of the extreme exhaustion of the patient. As soon as she rallied a little, he delivered her of a dead fetus. On removing the placenta it was found to have been centrally implanted, but was thinned over the os to a simple membrane not thicker than parchment.

DR. DAVID COHN inquired whether the sense of the meeting was that the curette was a harmless instrument and one to be universally advocated. It is true that it will cure many conditions more rapidly than any other means, but it is also true that many cases of shock and death occur from its use. He wanted especially to know whether the curette is to be used in cases of abortion within the first 3 months, if the entire contents of the uterus are not expelled? Shall immediate dilatation be practised and the curette used in such cases? The older practitioners did not do this, and lost few of their cases. Shall they abandon their methods and wield the curette? Winkel is conservative and thinks the curette does a great deal of mischief, and his tendency is toward conservatism in the use of that instrument. With this the speaker agreed.

DR. G. W. FULLER agreed with Dr. Cushing's idea in the use of the curette. He had never seen any dangerous symptoms follow its employment. He reported a case in which the woman suffered from hemorrhage every 2 or 3 was able to leave the city for the mountains, remaining at an elevation of about 5,000 feet, as highly recommended by some authorities. There was a marked improvement, and the patient remained away for four or five months. Later on, she returned to San Francisco, and was again treated for some time, after which she left for the mountains, remaining at Lake Tahoe. When she returned, she was much improved, having gained twenty pounds in weight. In this case, all the classic symptoms were well marked. The local enlargement, disturbed circulation, quick pulse and exophthalmos were very apparent. Graefe's symptom was very well marked, the upper lid not following the bulbus, but leaving a space of sclera between the cornea and the lid. For a long time it was thought that the nervous system, that is, the sympathetic, was responsible for the symptoms. Ehrenberg and Guttman, who have spent much time investigating the etiology of the disease, have demonstrated that both the thyroid gland and the sympathetic nerve were responsible for the symptoms, that is to say, either both, or one through the other. The irritation of the sympathetic acts on the thyroid, and the auto-intoxication of the secretion of the thyroid produces some of the symptoms. Other nervous disturbances are caused by the overflow of the thyroid juice. Experiments of other investigators tend to support this hypothesis. It has been shown that the irritation of the sympathetic in the cervical region will cause the thyroid to enlarge and become hyperemic to a marked degree. In one of the operations performed by Mickulicz, in this disease, there was no swelling of the thyroid, but a large sub-mental lymphadenoma, which pressed on the cervical ganglion of the sympathetic. After its extirpation, these symptoms disappeared. This case supports the sympathetic origin of the disease. The therapy of the disease includes electricity, iron, arsenic and climatic treatment, at high elevations. Many cases improve, but those of the graver type do not show much change. During the last few years, efforts have been made to cure the disease by surgical interference, removing the gland entirely or in part, or ligating the thyroid artery. These measures have been more or less successful, as any effort to reduce the size of the gland improves the case. In some cases, the exophthalmos and thyroid swelling may be absent, but the circulatory and nerve symptoms are always present. At the last Surgical Congress, Mickulicz reported eleven operations, with a comparative cure in six. The period that had elapsed since operation varied from one to nine and a half years. Of the remaining cases, five in number, four were markedly improved, and had been under observation from two to twelve months. The other did not show much improvement. These cases were all severe, exhibiting the usual symptoms. A remarkable feature is that the improvement may not follow the operation immediately. Months, or one or two years, may be required for a complete cure of all symptoms. The nerve symptoms are the first to improve, then the circulatory symptoms, and lastly the exophthalmos. Mickulicz ligates the four thyroid arteries in one sitting. Trendelenberg does the operation in two sittings, taking one side first. He claims that the shock is too great when the four arteries are tied at one operation. Shock does sometimes occur during the ligation, but it is not so severe as when extirpation is performed. Thyroid feeding has recently been put forward. Marked improvement follow its use in these cases, and in myxedema. The speaker could not see that any advantage had resulted from it in his case. From a clinical standpoint, he thought that ligation of the thyroid arteries promised the best results.

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DR. W. F. CHENEY regarded uterine hemorrhage as a most important symptom. He had used the curette with most satisfactory results. In abortion, he believed the indications are to empty the uterus as soon as possible, for as long as any particle remains, hemorrhage will continue. He knew no better way to accomplish this than by the curette. He regarded a persistent hemorrhage as due to a neoplasm or subinvolution usually, and reported a case in which the uterus had been curetted repeatedly for hemorrhage, without benefit, before a small fibroid was discovered, on removal of which the trouble ceased. He emphasized the importance of looking for the cause of uterine hemorrhage before instituting treatment of any kind.

DR. R. W. MURPHY reported a case of twin pregnancy, in which the hemorrhage, during the delivery of the first child, was so severe that the mother died during the delivery of the second child, in spite of all that could be done.

DR. L. C. LANE said he belonged to the old conservative class, and did not believe much in instrumental interference in abortion. He believed the curette had been frequently an instrument of death. The greatest caution should be observed in its use, and this should be confined to those whose experience had been considerable.

DR. A. P. DUDLEY, of New York, intimated that his remarks might be opposed to some of the opinions advanced. He regarded the curette as a most valuable instrument. He does not use it as much as he formerly did, and he had seen some unfortunate results from its use. He had seen uteri in which the fundus could not be appreciated, so soft was it, but these very cases are the ones in which the curette is most needed. He always uses ether as an anesthetic, and always has plenty of assistants. Careful measurement of the uterus will show how far to go. He insists that if the instrument be used at all, it should be used most thoroughly. He believes in the application of pure 95 per cent. carbolic acid to the uterine wall after curetting. He has yet to see a bad result under such precautions. He considers that the curette is a most valuable and much abused instrument, but in the hands of a careful, conscientious man, who is sure of his diagnosis, an indispensable one.

DR. CUSHING, in replying, said: He did not design, in his paper, the inclusion of hemorrhage in connection with childbirth. In reply to Dr. Cohn, he would say, that the curette is a dangerous instrument, and that this is to be said of all intrauterine instruments. As Dr. Cheney had said, any particle of tissue within the uterus, keeps up the hemorrhage, and its retention is attended with more danger to the woman than the use of any instrument. He believed that most of the bad results from infection are due, not to the curette, but to the retained decomposing contents. As to perforation of the uterus, he did not recommend it as a routine procedure, still he had seen it done more than once without fatal results. If infection occurs in other cases than abortion, the chances are 100 to 1 that the instruments are dirty, or that the uterine contractions have expelled pus from the tubes. Pyosalpinx is as common as endometritis, and the mistake is not in the use of the curette, but in overlooking the salpingitis which contraindicates its use. The real secret depends on the ability of the operator to determine whether or not the woman is suffering from disease outside the uterus. In subinvolution, fibroids, etc., the uterus is as solid as a rock, and there is no other way of reaching the diseased tissue except by the curette. He insisted that in the hands of a skilful man, who knows whether there is a coëxisting pus tube, the instrument is invaluable. Martin uses it invariably, and believes it is essential to the success of any operation on the cervix. He recognized the condition spoken of as persistent, excessive hemorrhage without discoverable cause. He had seen it and he believed it to be a nervous condition. Before concluding, he wished to urge the encouragement and better payment of those who are devoting themselves to microscopical diagnosis. Not many men, outside of those who do nothing else, have the ability to decide, with any degree of certainty, the character of a given bit of tissue.

Bacteriological Laboratory, Cooper Medical College.—DR. ALBERT ABRAMS read some extracts from the preliminary report of the Bacteriological Laboratory of Cooper Medical College. The work that is being done by Dr. Newman is not yet completed. Dr. Abrams described his method of parenchymatous aspiration, by which he claims to be able to absolutely diagnosticate leprosy. He asserted that he had been the first to do so.

DR. L. C. LANE said he remembered Dr. Abrams' paper of 1891 (*vide* MEDICAL TIMES, vol. v, p. 272). *The Lancet* gave it quite a review and praised it as a valuable addition to our means of diagnosis.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

Fifth Annual Meeting, held in Sacramento, October 8, 1895.

MORNING SESSION.

The fifth annual meeting of the California Northern District Medical Society was held in Pythian Hall, Sacramento, Tuesday, October 8, 1895, the meeting being called to order by the President, H. D. LAWHEAD, of Woodland.

Addresses of Welcome—C. B. NICHOLS, President of the Sacramento Society for Medical Improvement, delivered an address of welcome. He said: On behalf of the Sacramento Society for Medical Improvement, as the president of the oldest local society in the State of California, a society that has carried on its roll, since its inauguration, some of the brightest men in the medical history of California, it is a pleasure, as well as a duty, to extend to you a very cordial welcome. The meetings of these societies are extremely useful, as well as enjoyable. They afford the members of a widespread profession, a profession whose work is very exacting, an opportunity, and one which is observed far too little among the medical profession of the entire State, to renew old acquaintances and old friendships, and form new ones. They also bring together men who are engaged in the active profession of medicine, who are able to present to you questions of practice, in a manner that will elicit discussion, which is a benefit to all the members who attend. We, as a society, trust that this meeting will be beneficial, as the meetings in the past have been; that your short visit here will be of benefit to each one of you personally, and a pleasure to you socially. The committee of arrangements has formulated a plan whereby nearly all of your time which will be spent in the city will be utilized to the best advantage. We shall extend to you this evening something different from the dry detail of medicine and surgery, and hope that we shall send you home not only full, but happy—full of kindly remembrances of the profession of Sacramento, and full of a renewed interest to go on with your life's work, devoting it to the benefit of suffering humanity and to the elevation of the profession which we all love so much.

DR. J. H. PARKINSON, Chairman of the Committee of Arrangements, on behalf of the committee, said: There is but little for me to add to that which our President has already said on behalf of the local society. The programme has been arranged so as to cover the time as economically as possible. There will be no session this evening, that time being occupied by a banquet, and the hour has been so fixed that we hope all the visitors will attend, the Eastern and Oregon trains leaving at such an hour that everything can be over by that time. I have to congratulate the society on a larger attendance from outside than has ever before honored this city. The programme is a full one. There is ample material for discussion, and promptness will be necessary in order to get through all our business. We will doubtless have a larger attendance from the city this afternoon than during the morning session, because, as you all know, when a society meets in any town, the attendance of the profession in that town is not as good as it ought to be. Many are compelled to attend to business, and some are unavoidably detained; and while we have a fair representation here this morning, I think our representation this afternoon will be much better.

Annual Address.—The annual address [published at p. 635] was then delivered by the President, H. D. LAWHEAD, of Woodland, who had taken as his subject, "Interstitial Electro- Chemical Decomposition and Medication."

DR. J. H. PARKINSON, of Sacramento: I think the Society is to be congratulated upon the President's address, as illustrating one important point, that electricity does not belong to the domain of the specialist solely, and that much can be accomplished with this useful agent by the general practitioner. I have used electricity in practice for many years, and am perfectly satisfied of its utility and of its benefit in a large number of cases, troublesome cases, in which other things, ordinary medication and the means usually at our disposal, are not so useful. There is one point of prime importance in the use of electricity, and that is the possession of efficient apparatus. Efficient apparatus does not necessarily mean a very expensive outfit. I would most strongly and emphatically advise every practitioner not to buy "outfits" that instrument makers put on the market. They are often complicated, they are always expensive, you always pay more for that class of apparatus than you do for one which is just as useful. You are paying for ornamentation and style, and for many little *et ceteras* that are wholly unnecessary. It is also necessary that the practitioner should get into his head some clear perception of electro-physics. It is necessary, first of all, for him to clearly recognize that there is a vast distinction in therapeutic action between the constant or galvanic current and the induced current. Some men seem to think that electrical treatment means the application of a current from a battery; that any battery is good enough, and in fact that there is no distinction between the ordinary little "buzzer" that may cost ten or five dollars or less, and the current from a 50 or 75 cell galvanic battery. That is, I think, the first and prime important point. The faradic current and franklinic or static electricity, are, I think, limited in application, and much less useful than the constant current. In the treatment of paralyses which hold out some prospect of cure, the faradic current is useful. It is useful for stimulating the muscles until the nerve force begins to again manifest itself. It, of course, is useful in other directions, but as a matter of general application, the constant current is what we need. Any cell of the Leclanché type—and there are several—can be used in this connection, and if the practitioner will buy a sufficient number to start with and then add to them as he wants to or can afford to, he will be able to command a current that will accomplish any character of work. He next wants an efficient rheostat. A rheostat is better in a great many ways than a switchboard, though it can be used to advantage in connection therewith. He also must have a milliamperemeter, which should be one of definite value. There are several on the market, some good ones, some very expensive ones, and some not good enough; but there must be an efficient instrument. With these two he has got to provide a fair amount of battery, and he has then all the most important part of the apparatus. Electrodes are easily and cheaply made. They should have a covering that can be removed, and cleansed for each patient. I have said it is necessary to learn something about the physics of electricity. It is also necessary to learn something about the apparatus. Electrical work is expensive, and if the physician employing electricity does not familiarize himself with his battery, it will be a constant source of expense and trouble, always breaking down and getting out of order, and it will fail him at the critical moment. It is very easy to learn to keep a battery in running order and with comparatively little trouble. In the larger cities, where power is now to be obtained, the tendency of to-day seems to be to employ that form of electricity in medicine. There seems to be no fair argument against its use. The chemical effects are the same, and the physiological effects seem to be the same as with the battery current. This insures, provided the current be steadily supplied from the central works, an apparatus that is always in order, always reliable, and that is available up to any possible strength of current that can be used. It, however, necessitates a more expensive apparatus, and closer watching that this apparatus be in order, lest serious results ensue. In the practical application of electricity, it seems to me that the cases in which it is most useful are the anomalous ones—mysterious pains, neuralgias, troubles that cannot be reached in any other direction. In a large class of nervous diseases in which there is no apparent organic lesion, the constant current has, in my hands, been of vast benefit. I am not prepared to say how much this is due to the effect of moral influence. Many claim that this is the sole curative agent; but there is no question that the constant current will relieve those cases. They will gain in weight, they will sleep and they will eat, under the influence of daily treatment. Muscular pains, even the ordinary lumbago, can be relieved, practically instantaneously, by the application of the constant current. A strong current applied to the affected muscles will relieve, by magic as it were, a man who is unable to bend over or to stand erect, though of course the relief is not permanent. I do not know of any investment that the physician, with a fair amount of practice, can make to better advantage than the purchase of a good galvanic outfit, and I think if more attention were paid to it, particularly to the repair of the apparatus, there would be less dissatisfaction. Men buy batteries and throw them away, simply because they do not understand them. They buy things that are expensive, and neglect them; they get out of order and are not used, and the physician gets disgusted. A little more attention paid to physics and to the care of the apparatus, would, I think, be attended by far more satisfactory results.

DR. T. W. HUNTINGTON, of Sacramento: I have at the Railroad Hospital an indifferent constant-current battery, and it is used there under my direction or suggestion, occasionally. In the class of cases to which it has seemed to be applicable, and for which it has been used, I have to say that it has given me very much satisfaction. That class of cases has been outlined in the main by Dr. Parkinson. I have, under his suggestion and by his advice, confined my use of electricity chiefly to that class of cases. I wish, however, to say a word with regard to the general consensus of opinion upon the use of electricity surgically, to which especial reference was made, and in support of which, cases were quoted by the President. I must say that his results were to me rather surprising. They were something of a revelation to me, although I have known something of the use of electricity in this connection before this time. I have seen occasional reports of the work of other authors, which, in a measure, bear out his statements. I believe, however, that in the class of cases to which reference has been made, and which were quoted, there is a positive danger in the use of electricity, which should not be lost sight of, and which should be taken full cognizance of before entering upon that field of work. In the first place, there is no doubt that electricity, the negative pole at least, does possess a positive resolvent influence, if properly applied. For instance, in the case of neck tumor, quoted, there is no doubt that the use of electricity there liquefied, destroyed, the internal contents of that mass, whatever it may have been. I am by no means prepared to admit that it was sarcoma, or that it was any form of new growth, that is recognized as one of the neoplasms of pathology. I believe, in the first place, there is the possibility of infection in those cases, an element of danger which far overreaches the advantages that may be obtained by that method of treatment over the use of the knife. In the use of electricity in genito-urinary surgery, especially as applied in the treatment of urethral stricture, the dangers are so great that it has been practically abandoned. If the current employed is of a character to be safe, it is inutile; it cannot be relied upon to provoke absorption of a well-organized urethral stricture, unless it is strong enough to destroy tissues which ought not to be destroyed. I have never used it in this connection, but I have never seen any reported cases where the resistance was so small as in the cases which have been related to-day; that is, where the poles of the battery are brought in close contact. I believe it would be a very dangerous thing to resort to any such measure. As a matter of fact, it has been practically abandoned by genito-urinary surgeons. In uterine myoma, it is gradually becoming obsolete. I think the consensus of opinion to-day is to the effect that its benefits are so slight and its action so unfortunate in some cases, that it had better be discontinued, and where treatment be necessary, the case is relegated to the hands of the operative surgeon. In that class of cases, certainly a preliminary course of electricity is a disadvantage; that is, it is a disadvantage if the current be used with sufficient strength to be of any influence whatever. If you simply use a mild, stimulating current, I do not believe there is any danger or disadvantage, but if you use such a current as is suggested here, with the idea of getting resolution, or of obtaining any positive advantage, then you are liable to get a condition which will render the case inoperable in the end, and thereby place the patient in a hopeless condition. I believe that electricity will always be used in medicine, and in surgery as well, in the class of cases which have been outlined by the last speaker, where there is paralysis, from one cause or another, and where we need muscular stimulation, etc. As far as its taking the place of the knife, I do not believe that it has any position in surgery whatever. This is a pretty abrupt and positive statement, but I think that coming years will verify the statement, and will substantiate me in my present position.

Dr. C. B. Nichols, of Sacramento: I remember, several years ago, when the Apostoli wave of electricity struck this country, I had several friends who invested from $140 to $500 in batteries. I was invited several times to witness the application of electricity, according to this system, and not only that, but to watch—I speak more particularly of myo-fibroma—the tumor disappear. In several of those instances, I, personally, know that the battery has been taken down and packed away safely, so that it would not be injured, to be left to posterity, as a relic of one of the greatest fads in medicine which has ever struck this country. Dr. Parkinson, in his remarks, outlined a certain class of cases in which he claims electricity is beneficial. While I do not deny that there is something in electricity, it is in those cases which Dr. Parkinson has outlined where the greatest amount of benefit has been received and shown. There is a great deal in the fact that you have your office filled with a very large battery, with a great deal of machinery and a great many complicated instruments that impress your patient with the idea that you are a very great man. It is worth something; it means dollars to the man who puts enough of them out; I admit that it has been proven a great many times, but, as has been very briefly outlined by Dr. Huntington, there is another side to this question. In many cases—I speak more particularly now of surgical cases—it is positively injurious, as many of the men who first attempted to reduce myo-fibromata by electricity have had occasion to prove upon the same patients, upon whom they operated with electricity, in the added difficulty which they have encountered in attempting to remove that tumor. It is not necessary for me to reiterate the points which Dr. Huntington made, but they were true. In any case of fibroma of the uterus, if you apply electricity strong enough to presumably change the cellular condition of that growth, you will produce adhesions from the inflammatory result of your electricity, which in some cases have rendered the subsequent operation absolutely impossible. I will present to you this afternoon a pathological specimen of a myo-fibroma, and you can examine it and see, if you are familiar with electricity, whether it would be possible to reduce that growth by a current which is safe to apply to a living patient. Men who are progressive in that branch of surgery to-day deny, *in toto*, that it is possible to reduce one of those solid growths in the slightest degree by the application of a current of electricity that is safe to use on a living patient. It cannot be done. There are so many elements that enter into the question that it is not a safe proposition in surgery. I grant all the cases that have been presented here, especially the class illustrated by Dr. Parkinson. It does not have its effect upon the mind of the patient. Even in the lumbago, which Dr. Parkinson cites, he does not advance the idea that the cure is permanent; it is a temporary relief. What was the pathological condition back of that pain? What was the condition of the man's mind? You have no records of the pathological condition in any case that has been presented here. A mild current, which is acknowledged to be stimulant, applied to a fibroid tumor, will increase its growth. A strong current, strong enough to decrease the growth, if it is possible, is absolutely dangerous to your patient.

Dr. W. A. Briggs, of Sacramento: I think the Society is to be congratulated on having a President who has the courage, in these later days, to say a word in behalf of the surgical use of electricity. I am quite aware that electricity is under the ban of the surgeons. There is a quicker way in a great many cases, a more certain way of getting rid of the cause of disease. But it seems to me that the evidence is very strongly, I may say positively, in favor of the useful influence of electricity in a great many diseases, not merely in nervous diseases, but also in diseases which may be classed as surgical. As to the danger of the use of electricity in uterine fibroids, I want to say that the evidence of those who have used electricity—not the evidence of those who have not used electricity, for you will note that the men who condemn electricity—Mr. Tait, for instance, and others in the journals—are those who disclaim ever having used electricity to any extent. Tait says he used electricity 20 years ago and is satisfied it is useless. He used electricity 20 years ago, when it was a very different science from what it is to-day, and he used electricity in a very different way from what it is used to-day. In fact, his experience in electricity may be counted as absolutely nothing. Dr. Price, of Philadelphia, who is equally positive of the injurious effects of electricity and of its want of beneficial influence in these cases, has likewise had no experience in the use of electricity. Therefore, we must take this evidence, if it may be called evidence, with a great deal of allowance. Let us look at the other side. I do not mean to say that a solid fibroid tumor will be dissipated and will disappear by electricity, but there are those who say, and say upon the basis of experience, that uterine fibroids and uterine myomata may be symptomatically cured by electricity, and they give you the evidence; they give you the cases in support of this. The experience of Apostoli and of hundreds of others who have used electricity very extensively, shows that the proper and careful application of electricity is not dangerous. The interstitial use of electricity, the insertion of needles, and the use of large currents, as was advocated at one time by Cutter, is certainly dangerous. But the intrauterine use of electricity, the application of electricity to overcome the symptoms which uterine fibroids so often produce, the symptom of pain, the symptom of hemorrhage, is certainly not dangerous. From a considerable experience, from a considerable use of electricity, even in these cases, while I would not expect the dispersion of a large tumor, I would expect, in the majority of cases, to produce great relief. That is the result of my own observation in these cases. In a small fibroid, in a woman advanced in life, I should say that electricity—and that is my own observation of several cases—will put that woman in a condition to pass the menopause in a comfortable way, and to reach old age without falling into the hands of the surgeon. A great many of these cases, no doubt, require surgical operations; everybody admits that. Those who use electricity most largely, not only admit it, but assert it. They do not use electricity as a panacea for all surgical ills, for all tumors; but neither, it seems to me, should the knife be put forward as a panacea for all surgical ills. It seems to me that a scientific attitude would be to look at the evidence carefully, and to give the knife the credit which belongs to it, and not to condemn electricity absolutely, until either the evidence of those who have used it is against it and condemns it, or we have had our own personal experience, which will conduct us to the same opinion. In the case of uterine fibroids, while I use electricity less than formerly, and while I expect less of it than I did at the time of its first introduction, I am certain that I get excellent results. I could point you to several women who are going about and enjoying life, leading a comfortable existence, who, before the use of electricity, were a burden to themselves and to their friends. In those cases which are nearing the menopause, and in those cases of small fibroids which produce a great deal of trouble, and which seem oftentimes of importance enough to require surgical measures, I believe we shall find electricity to be very valuable, not only now, but for a long time hence, until we discover some other agent which may take its place. It seems to me that if I had a patient who, by some harmless means, some means which does not endanger life, can be made comfortable, I should prefer those means to other operative procedures which do unquestionably endanger life; and I believe that is the way a great many patients look upon it. Some more readily than others will accept an operation as soon as it is suggested. Others, more conservative, will prefer to try milder means, if they are not so certain. From a large experience in the use of electricity, for more than 20 years, I am very positive of its influence in certain forms of neuralgia, especially in that form of neuralgia which is oftentimes so rebellious. which we call gastralgia. I have had 3 cases of that which I can now recall, that have been cured by a short course of electricity, which had resisted every other means used by several eminent men. The first that fell under my observation was in a man some 50 years of age, who had been under the care of Dr. Gross, and other men equally eminent; 2 or 3 weeks of constant current electricity cured that man. I have had several such cases since that time, two within the past year that I now recall, and I presume others in the interval. In lumbago, it certainly has brilliant results very often; and when we speak of the mental influence, it seems to me that lumbago is one of the last diseases in which we expect a cure by purely mental influence. If a man lies upon your table with a severe case of lumbago, or other form of muscular rheumatism, and you apply a good current of galvanism, and he gets up and walks away in comparative comfort, I say there is no reason whatever to regard that as a mental influence. I believe that electricity has some positive curative effect. I believe it, not because I have not thought enough of it to use it myself, but I believe it because I have used it and because I have seen the effects.

DR. A. W. HOISHOLT, of Stockton: With regard to the use of electricity in surgery, I have had no experience, but I want to say a few words with regard to the effect of electricity being confined to the influence on the mind. I have made observations, not on live patients, but on animals, where I could not be deceived. I have made a great many vivisection experiments, and there is no doubt that the application of currents, such as are used in therapy, have a decided effect upon tissues. I have seen it a great many times. The President refers to the stimulating effect of weak currents, and the paralyzing effect of strong currents, I have many times applied electricity that way to the nerves of frogs, making use of the miograph to record the extent of contraction. I found that after a mild current had been applied to the nerve, I would get an increase in the elevation of the lever, that is, an increased contraction, as the result of the stimulation of weak currents, while when I used very strong currents, the nerve became completely paralyzed. That to me shows definitely and conclusively that weak currents stimulate and strong currents paralyze. Aside from this, there was one point in connection with the theory involved in this subject that brought an idea to my mind, namely, the direct effect of electricity upon tissues; the effect of mild currents, for instance, upon the muscular tissue. Whether there is such direct effect, has been questioned by a number. It is said that when you apply a current to a muscle, you get the effect, not through direct stimulation of the muscle tissue, but through stimulation of the nerve terminations in the muscle. I once worked out the subject of the impulse, the traveling of the nerve impulse through nerve terminations, and I found when I stimulated—using the same current—stimulating the nerve and muscle at the same time, I would get the greatest amount of contraction, and that when I stimulated the muscle alone, I would get a contraction the extent of which could not be reached by stimulating the nerve only. That would show that the nerve is capable of stimulating the muscle to a certain extent, and as stimulation directly of the muscle tissue would bring about greater contraction, the current must have a direct effect upon the muscle tissue.

The PRESIDENT, H. D. LAWHEAD, of Woodland: I had desired, and asked that there be no discussion upon this paper, as I believe it is a little out of the usual order of things, and I had not intended to say anything further myself, but my objecting friends render it rather necessary. In the first place, I want to concur in nearly all that those who oppose the use of electricity so strongly state. I want it to be understood that I take the position in the main which those gentlemen took, that is, that there is danger in using a strong current. I stated that in my paper, and undertook to say that where there be suppuration, or any danger of infection from any source, there should be free escape; that every precaution possible along the line of asepsis was absolutely and always necessary. I did not undertake to advance electricity as a supplanter of the knife at all; but I did undertake to say that in cases like that of the Chinaman, I would suggest it where the use of the knife was impracticable. The impracticability of using the knife in that particular case was not my judgment; it was the judgment of surgeons in San Francisco and other places. I undertook that case in behalf of the Chinaman, and in behalf of what I wanted to find out, thinking it might afford him relief from his symptoms, and if it did not, I hoped to do him no harm; and so far as I know, it did not do him any harm. The cases that I have mentioned, I have had under observation, and most of them physicians present saw and observed all the way through. I may have been in error on many points; I did not pretend to establish a scientific system. I did not state any such thing. But I think it is only just that the same amount of consideration, the same amount of experience, and the same amount of comparative information on two subjects, lying parallel, be exercised upon one side of the question as upon the other. It would be just as forceful to argue that deflection of the surgeon's knife, in a certain locality, might cause instantaneous death; because we all admit that the greatest precautions are all the time necessary. I said that the application of electricity should be in carefully selected cases; that it should not be used indiscriminately and unintelligently, and that it could not, under any circumstances, be expected to supplant the knife. I congratulate myself that those who criticized more favorably are those who, from their own statements, have had more experience with the use of electricity. The opposition criticisms are very excellent, and they are helpful, because we cannot appreciate a question unless both sides of it be brought forth and emphasized. The points mentioned by Dr. Hoisholt have been those which have especially interested me, in his observations of the action of the current. There was one thing which struck me, and that was the insinuation that the person who has this electrical apparatus and pharaphernalia may have it profitably for show and for self-advertisement. That does not effect me, because it does not apply, and I do not, personally, feel anything on that score. I want to say, in conclusion, that I absolutely know that electricity, especially the constant current, may be used as intelligently, as legitimately, as helpfully, in well selected cases, as may the knife, or any other means. Each has its particular line of cases, to which it is best adapted, the one, under no circumstances, being able to sup-supplant the other, and I think whenever it undertakes to do so, it is a mistake.

A Contracted Sphincter as a Cause of Many Ills—E. B. ROBERTSON, of Jackson, read a paper upon this subject. He said, to describe all the ills engendered by and attributed to constipation, with its retained fecal accumulations, would require a larger and broader scope than was possible in this paper. While many complications might exist with this condition, careful investigation would generally disclose the fact that a contracted anal sphincter was the principal factor in causation. He wished to protest against the indiscriminate use of cathartics. Physiologically, certain secretions had been provided by nature to insure proper intestinal evacuation. Constant doses of cathartics, by removing these secretions, were exceedingly harmful, and intensified the disease. An overloaded condition of the bowels could be temporarily relieved by the prompt use of the syringe. The speaker then described his method of washing out the colon with large enemata of hot water. Women, owing to their sedentary habits, were more liable to constipation than men. In some cases the masses of impacted feces in the rectum and sigmoid flexure were such that the injected fluid could not pass beyond them. The author overcame this obstruction by placing the index finger in the vagina and drawing the perineum well back against the nozzle of the syringe. In this way the bowel would be fully distended and the fluid would find its way past the obstruction. To overcome the contraction of the sphincter, he proceeded as follows: He first emptied the bowel thoroughly; then, with the patient on his right side, the thumb of the left hand and the middle finger of the right hand were passed into the rectum; then drawing these apart until there was room enough to introduce the index finger of the right hand, as an assistant, traction was made with both hands until the fibers of the sphincter could be felt to give way. This could be done with or without an anesthetic, as preferred. The only treatment subsequently necessary was an occasional injection of warm water.

DR. A. W. HOISHOLT, of Stockton: The author referred to the filling of the colon with water, in injections. This brings up the question whether it is possible to force the water through the valve of Bauhin into the small intestines. Professor Oser of Vienna has always contended that it is possible to force the water through that valve by injecting through the anus, but a great many authorities disagree with him. I was present once when he demonstrated it on a cadaver, and it was quite easy to do so. That would not make it certain that it could be done in the case of a living being. I remember two cases, one was related to me by Dr. Asa Clark of Stockton, that, on the surface, might corroborate Oser's view, although, on coming to study them out, it is not at all certain. He had a case that presented symptoms of impaction, or possibly some obstruction in the bowels. I think Dr. Clark diagnosed it as torsion of the bowel. He used injections before resorting to an operation, and after giving them repeatedly, the patient suddenly said he felt the soapy water in his mouth, and there was immediate relief of pain and all symptoms subsided. I had a similar experience once, myself. A patient had not had a movement for a number of days, and was suffering great pain at one spot in the abdomen, and presented other symptoms, which were diagnosed by several physicians as pointing towards torsion. Chronic constiption was out of the question. Injections were used in a similar way, and that patient also contended that he could taste the soap in his mouth. That this was due to the water passing into the small intestine and into the stomach, I suppose is out of the question. It might have been absorption by the blood vessels and the carrying by the blood of these particles or elements, or these chemical substances, to the salivary glands and into the mouth, that would explain the taste.

Dr. M. W. Ward, of Woodland: I used to be troubled a great deal with constipation, and used to experiment extensively on myself. I suppose I tried all the drugs that I ever heard of. I also tried injections to a great extent. I believe that if I had had my sphincter stretched, as the doctor suggests, it would have been a good thing for me. I have found, at times, when I would take an injection, that I would be so weak I could hardly walk for several hours afterwards, and I have wondered what the cause of it was. Would it be safe to place this kind of an injection in the hands of persons indiscriminately? If a person be suffering from an organic disease, and if he should take an injection once or twice a day, I don't know whether that would be safe. A theory has been advanced that when you put so much water into the bowel, and then withdraw it with a syphon action, you pump out the small intestine, and all the nutritive matter that should go to this weak person goes right out with the water you draw off from the non-absorbed food that is lying there in the small intestine. I think it is not absolutely safe to give any one instructions that he can take injections indiscriminately.

Dr. W. C. Baylor, of Willows: In 1872, when in the wilds of Texas, I was called out to see a gentleman who was supposed to have been poisoned, through the mistake of a druggist. The man was living in what was called the Section of Cross Timbers. When I got there I found him entirely unconscious. and unable to swallow anything. I thought I would give him an injection, in the absence of being able to do anything for him in those woods. The man was lying prostrate on the ground, and I started in with a sufficient quantity of water, and meeting with no resistance to the ingress of the water, I kept on until finally my patient began vomiting, and got the contents of the bowel entirely through the stomach. It passed through, and there was no resistance at all to the ingress of the fluid. That is one case in which I am satisfied that the man not only tasted the soap, but that he passed the soap on through him.

Dr. W. A. Briggs, of Sacramento: There is one point in connection with these injections which I think is important, and that is the possibility of injury from the introduction of a large quantity of water into the blood vessels. We know, as a matter of fact, that pure water is in a certain sense poisonous, if introduced in large quantities into the blood vessels; that by its difference in gravity from the gravity of the serum, it produces such a change, such an absorption; that is, the blood corpuscles absorb such a large quantity of water, that they disintegrate. Death can be readily and certainly produced by injecting distilled water into the blood vessels, and it has occurred to me that possibly, in connection with these large injections, enough pure water might be introduced into the small vessels of the intestine to act in that way on a smaller scale, and possibly do serious injury. In my own practice, where I have used large injections, it has been my habit to use a normal saline solution, something like a teaspoonful of salt to a quart of water.

Dr. Hoisholt, of Stockton: It is likely that such bad effects might result from the injection of water in large quantities, and would in every case result, if it were not for the endosmosis that takes place in the intestine. There is a constant exchange, not only of salts, but of water, from the blood vessels into the contents of the intestine, and through the contents of the intestine into the blood vessel, and probably the stream or current being in that direction would, in many cases, prevent evil effects. Dr. Robertson does not think that injections of large quantities of water can have any bad effects. If he means when using them occasionally, I agree with him. But where they are used constantly, I do not agree with him. I just want to remind the society of the so-called Hall's treatment; I think that is the name of it. There are dozens of people who practice it to relieve constipation. I have made direct observations in at least two cases, where there can be no doubt that the constant use of this treatment produced partial paralysis of the bowel, and resulted in constipation and torsion. I think a word of warning ought to go to the public as to the use of that method.

Dr. A. T. Hudson, of Stockton: In regard to the soapy taste coming through the bowl, I think we have a right to be very incredulous. I have had patients say that they could taste iodine and nitrate of silver, when applied to the uterus, soon after it would be done, sometimes in a minute or two. How that happens I leave others to decide, but that is a fact that I have observed, and I have known others to observe the same. That is not because the remedy went to the mouth, however.

Dr. F. B. Sutliff, of Sacramento: Several times I have recommended injections of water, and have had either the patient, or the parents, or some friend, protest and say that in that particular case, an injection could not be borne, on account of weakness following it. I think I recall two such cases. I have always respected the opinions advanced by the friends of the patient, and have never insisted upon having an injection given.

Dr. Robertson, of Jackson, in replying, said: Dr. Elmer Lee, of Chicago, in a paper published in the *Journal of the American Medical Association* of this year, on the subject of the treatment of cholera, covering his observations of the disease in Prussia and elsewhere in 1892, lays down this method. He gives from 1 to 3 gallons of water, by injection, and he uses absolutely no medicine except peroxide of hydrogen (Marchand's) or hydrozone. These he gives largely diluted with water, and urges the patients to drink all they can of it. He has written a paper on typhoid fever. He regards the pathology of typhoid fever precisely as I do, that is, mostly an inflammation and frequently ulceration of the intestinal glands. He claims to reach those glands and wash them out with hot soap and water. He says: "Make the water soapy and use it quite hot, and inject as large portions as possible; make the patient absolutely clean; first by the copious use of water and soap externally, and cleansing his system internally." That is his chief treatment for typhoid fever. In regard to whether it can do an injury, let me call your attention to the location of the colon and its direction. Let the patient lie on the right side, with the hips elevated 4 or 5 inches higher than the shoulder, and pump in the water. You have thus placed the descending colon on a level or very nearly so. The water will pass unobstructed to the transverse colon, when it will readily pass from left to right by its own gravity and fill up the ascending colon, together with the cecum, without causing any pain at all. Dr. Wingard, in the "American System of Medicine," says: "Let the patient lie on the back or on the left side." There is not a man in the world that can lie on the left side and take that quantity of water without extreme pain and suffering. He says that the injection should not be administered to the extent of creating too much pain. I don't know how much "too much pain" would be in that case, but I do know that I cannot lie on my left side and take an injection. Why? Because I have the hydraulic force against the passage of the water from right to left, and when I come to force that water up against the transverse colon to get it into the ascending colon, to the cecum, there is a pressure there that feels to me as if it were bursting. If you will give the injection large enough, I believe you can force open the ileo-cecal valve and wash out the lower portion of the small intestine, the ileum, the location of typhoid fever. I was the subject of habitual constipation for 15 years, and I would not have myself operated upon for a contracted sphincter, because I was afraid it would hurt; but finally, I got into a condition of epilepsy, and I had downright epileptic fits, so much so that I bit my tongue, and was unconscious for a length of time subsequent to those fits. When I got my sphincter all right, I got well of the fits. The sole cause was the retention of fecal matter. I have never had any fits since; that is several years ago. A painter, from Sacramento, came to Jackson to visit relatives; he fell in a fit and I was called to see him. He had been compelled to give up his business because he was afraid to go on a ladder, lest he should fall in a fit and break his neck. I stretched his sphincter, after washing out the bowel, and he got well and has had no more trouble. There was a ditch tender, at Volcano, in Amador county, who became so violently and frequently attacked with epilepsy, that he was afraid to tend the ditch lest he would fall into it and be drowned. He had first called in another physician, who is a young man; this gentleman diagnosed his case to be one of tumor of the brain, and that the fits were owing to the growing tumor. I found the trouble directly at the other end. I gave him a very copious hot-water injection and stretched his sphincter. The man got well and has been well ever since; he never had another fit. Now, as to infants; you can lay the child on its right side with its hips elevated above its shoulders, and pump in warm water slowly until it runs out. There is no danger of bursting the gut as long as there is a hole for the fluid to run out. When the gut is full the water will escape or pass the nozzle of the syringe, which is evidence that the colon has reached its capacity. I give these warm water injections to new-born babies, instead of administering castor oil, and have for many years past. These large injections never create any constitutional weakness. The injection may cause a feeling of weakness after its administration. The transverse colon, when distended, presses upon the stomach and will occasionally cause nausea, and even vomiting. No considerable amount of pain can ever be induced with the injection. There is no possibility of hurting the patient, that is, if he be a man. You can hurt a woman, because, as I have said in my paper, you can insert your finger into the vagina and draw the perineum back against the nozzle of the syringe, and in this way hold the injection perfectly tight. You can probably hold her tight enough to burst the gut, but you cannot burst it in a man, because he has got no place for your finger.

Tubercular Pyelitis, with a Report of Three Nephrectomies.—G. A. WHITE, of Sacramento, read a paper upon this subject. He said the gravity of this disease and the unsatisfactory results of medical treatment placed it prominently within the domain of surgery. Having enumerated the number of exciting causes, usually given in connection with the disease, he said it might be safely asserted that 90 per cent. of all the cases were due to nephrolithiasis, ascending cystitis or tuberculosis. The most prominent symptoms in the acute stage of the disease are those indicative of visceral inflammation in general, as nausea, vomiting, rigors and pain. This pain was in the loin and usually increased on pressure. The urine was scanty, and contained mucus, with blood or pus, indicating the progress of inflammatory action. As the disease advances, the pain diminishes and the urine increases in quantity, becoming cloudy from admixture of pus. The quantity of pus in the urine may vary from day to day. Hematuria is a frequent symptom of calculous pyelitis. As the disease advances, the general health begins to suffer severely, and the patient develops nearly all the symptoms of septicemia. The speaker then reported three cases of nephrectomy, which, with a fourth, that was really one of evacuating a large nephritic abscess, comprised his experience with the disease. Of these cases, two were successful and two unsuccessful. The unsuccessful cases were, at the time of operation, suffering profoundly from septicemia, and were in a very unfavorable condition for surgical interference. Specimens from the two other cases, as well as one of the patients, were exhibited.

DR. R. F. ROONEY, of Auburn, in opening the discussion, said: I must disagree with Dr. White as to the easy diagnosis of tubercular pyelitis. I remember one case in which I was called in consultation. The case was diagnosed by the attending physician as intermittent fever, but he could make no headway in the treatment. On first examination, I fully concurred with him, but later on I elicited that the patient came of a tuberculous family, and we finally suspected that there was some tuberculous trouble. On close questioning, we found out that he had some pus in his urine, and we finally narrowed down the diagnosis until we were satisfied the man actually was suffering from tubercular pyelitis, though there was not a thing to indicate it in his general symptoms, excepting a little pus in the urine. Urine, to be examined microscopically in these cases, should always be taken with the catheter; it never should be taken as it is passed into a vessel, in the natural way, from the fact that there is a bacillus, which so closely resembles the bacillus of tuberculosis that it is almost impossible to detect the difference; in fact, morphologically, and by their action with staining reagents, they are identical. We sent the urine to a microscopist, and he examined several slides before he found the bacillus of tuberculosis in it. The case went on from bad to worse, until he finally died. He would not consent to any operation.

DR. M. W. WARD, of Woodland: I happened to be connected with a case of tubercular pyelo-nephritis, in which an autopsy was held. Thinking that this case might be of interest, I brought my notes with me. The history is as follows: On January 9, 1894, the patient, a bachelor, aged 36, came to my office complaining of chills, fever, loss of appetite and pain over the left lumbar region. There was frequent micturition, the urine voided being of a whitish color. He had had gonorrhea and cystitis, which he thought had been cured six months ago. The urine was acid in reaction and contained pus; the urethra was very irritable. The temperature, which had been as high as 106°, F., was reduced to 101°, under the free use of quinine, but the fever never entirely disappeared. An alkaline mixture lessened the frequent micturition, and his general symptoms seemed to improve. After the patient had urinated each morning, we could withdraw some residual urine from the bladder by the catheter. This was sometimes accompanied by pus and blood. The bladder was then irrigated with a warm boracic acid solution; salol and boracic acid were given internally. Later on, a spasmodic stricture became so severe that only a metallic catheter could be used. The temperature again went up, the general symptoms increased and the quantity of pus in the urine showed no signs of abatement. The patient was then removed to the hospital, where he gradually failed, until his death, on May 2d. At the autopsy, tubercles could be distinctly seen in the membranous urethra and fundus of the bladder. The left kidney had been entirely destroyed, its place being occupied by a pus sac. The right kidney had also been involved in the destructive process, and was infiltrated with pus throughout. The lungs and pleura and peritoneum were apparently healthy; the liver and spleen were quite soft.

AFTERNOON SESSION.

The Treatment of Pneumonia.—In the absence of the author, C. E. STONE, of Marysville, this paper was read by the Secretary. He said the treatment of disease, in the light of experience, leads to a discussion of the methods most beneficial to the practitioner. During his 46 years of practice, he had been obliged to treat pneumonia under various conditions, and with both sanitary and unsanitary surroundings. In the year 1849-50, and subsequently, until the advent of families, the doctor was obliged to rely upon such nursing as was furnished by men, wholly unaccustomed to sickness of any kind. The miners working in the river beds and upon the bars were usually soaked in water from the waist down during the entire day. Many of them slept in their underclothes and socks, wet as they were, and frequently a severe attack of pneumonia was the result. Few of the patients lived in log cabins where an equable temperature could be maintained. In tents, the only means of heating was by embers or coals taken from the fire outside and replenished from time to time, as the nurse thought would best conduce to his own comfort, the patient often not being considered at all. Having been accustomed to the old methods of treatment of pneumonia and other inflammatory diseases, by bleeding, etc., and having learned under his father's teaching that venesection continued until the pain was relieved or syncope produced, usually resulted favorably, the speaker said he was not afraid to use the lancet in urgent cases. He could not now recall a case that had resulted unfavorably where he had resorted to early and free venesection. He often met old patients who attributed their continued good health to bleedings he had given them thirty or forty years ago. The after treatment consisted in the administration of tartar emetic, nitrate of potash, and submuriate of mercury, with morphine and opium in such combinations as the case seemed to demand. A generous blister was often applied, and repeated, where pain returned during the next 24 or 36 hours. This would be 8x10 or 10x12 ins. in size, and sometimes larger if the cloth furnished—usually an old shirt—would admit. In only a few instances was it necessary to resort to heart stimulants and digitalis, and the carbonate of ammonia sufficed. In the use of digitalis, the speaker said, he was again indebted to his father, who had always used this remedy in decided doses until the required effect had been produced. After the advent of families, when the patient's surroundings were improved and it was possible to procure fair nurses, it was not always necessary to resort to the lancet, cupping and poulticing taking its place. Having alluded to other methods of treatment which he now used, the speaker said he had abiding faith in the means which had permanently cured so many of his old patients. Of late years he had often been consulted by patients suffering from chest complications which they traced back to an antecedent pneumonia in which no cupping or poulticing had been used. The speaker said he was afraid that many of the old paths are becoming grass grown, and in consequence many grass-grown mounds are now occupied which might have been untenanted had the old ways been trodden more persistently. He then entered at length into the more recent treatment of the disease, as well as the management of cases, as regards hygiene and diet. Referring to the use of tartarized antimony, he had given this in as high as 2 or 3 grain doses, at intervals of from one-half to two hours, until the dyspnea had been relieved, and without any untoward results. It could be used on occasions when bleeding and cupping were not warranted, owing to the patient's condition.

Dr. W. E. Bates, of Davisville, in opening the discussion, said: I have never bled a patient with pneumonia, nor have I ever blistered them willingly. We read in the journals of the great severity of pneumonia. I am satisfied we will never have it as severely in California as they do in the East. I suppose in the mountain regions, where they have severe winters, accompanied by epidemics of pneumonia, that it is as severe and active as in the East. In looking up the literature of pneumonia, we can be satisfied that we have no specific for it, owing to the diversity of opinion in both the internal and external methods offered us. In the external methods we have our hot poultices, or we have ice bags ; we have rubber tubing coiled around the body, with hot water, advocated by one, and with cold water advocated by another, and it finally simmers down to a matter of opinion as to what our external application should be. Blakeley Smith, in the *British Medical Journal*, reports having followed Penwick's treatment in acute pneumonia, by means of ice cradles. He has two cradles, extending from the chin to below the feet; one is taller than the other. Between the upper and lower cradle ice is hung in buckets, so that the atmosphere only is kept cold. He reports very good results, but from a very small number of cases. As to the internal treatment, I think you will all agree that the principal remedy now-a-days is digitalis in some form, either digitalis or some of its alkaloids, digitoxin or digitalin. Digitoxin is supposed to be the most constant of the alkaloids in its action, and the most thoroughly reliable. By those who have used it in pneumonia it is said to be as near a specific as we can find. It, however, has to be administered in a solution of alcohol, chloroform and water, because it is insoluble in water, and if administered in alcohol and water it will be precipitated in the stomach, on contact with the gastric juices, and is therefore variable in its effects. There are some authors who have used strychnine in large doses, especially in cases of drunkards. It struck me as being a very good idea. In the hospitals that I have served in, where we had a drunkard with pneumonia, we always said his case was hopeless, but it strikes me that strychnine would fill the want of a drug that has not heretofore been used. Strophanthus and adonidin have also been used instead of digitalis, and found to be equal to, if not better than digitalis. Strophanthus does not contract the smaller arterioles as much as digitalis. In the way of diet, the indication is for light food, which will not excite cough in swallowing, and thus increase dyspnea by distension of the stomach or augment the feeble heart action by overtaxing the digestive power. Vomiting is to be guarded against. Starchy and saccharine foods must be withheld. Cold drinks are acceptable and beneficial, and water, plain or aerated, may be drunk in considerable quantities, except in full, plethoric people, who have a great deal of blood which is poorly oxygenated. You give them great quantities of water and the blood is still augmented in quantity, and does harm in that way. Fluids in great quantities, where tolerated, are supposed to be beneficial, by assisting the kidneys to carry off the deleterious matter that is taken up in the blood.

A Case of Induced Insanity.—A. W. Hoisholt, of Stockton, read a paper upon this subject [published at page 649].

Dr. W. W. McFarlane, of Woodland: I have seen five or six just such cases as the doctor mentions. I don't think there is anything very strange about those cases of induced insanity. You see the same thing almost every day of your life, where some man with a stronger mind than another one, who is constantly associated with him, will impress upon the mind of that man his own ideas: and it is just the same thing in insanity. A man who has naturally a strong mind will impress upon someone else his ideas, whatever they may be. In every day life, you will see the strongest mind impress the other one, and make him have the same opinions and even actions that he has. Some of the cases that the doctor mentions, and some that I have seen, I would hardly know whether or not to call them cases of induced insanity. I remember the case of a brother and sister, who went insane at the same time, and they both recovered. They both went insane a second time, at the same time. Whether it was induced insanity in those cases or not, I cannot tell. I saw another case, a man and his son, who both became insane at the same time. The father, only, recovered. In San Jose, there were twin sisters; one of them was committed to the asylum at Agnews, and the other was not committed. One of them was much more troublesome at home than the other, and they kept one of them at home. I heard from them probably twelve months ago. Neither had improved. In the case of twins, where the physical and mental resemblance is very strong, there is nothing unusual in one becoming insane after the other.

DR. A. T. HUDSON, of Stockton: I remember the case of a mother and her daughter, some twelve or fourteen years ago. I was called to treat the mother. The daughter was well enough, but was a weakly child, thin and delicate and uneducated, having had only a few months at school. She seemed to be incapable of attending to the wants of her mother, but she did it some way, because the mother relied upon her. The mother was totally helpless, and yet she was healthy and well developed, and you could find no disease whatever by examination, and she would talk rationally until you asked about her disease; then she would have the peculiar characteristics, for which you could find no reason whatever. I saw there was a mental aberration that I could not account for. So long as I would admit her own view of the case and coincide with her, she was glad to see me and to have me visit her, but the moment I began to question her and doubt her description of herself she said she did not want to see me any more; and finally she did not want to talk. At one time she had the notion that she could not talk without great exhaustion, and would write all her answers. After several months she got over that, and when I saw her, she was talking loudly and readily, and without pain. During all this time there was no evidence of any physical disease. Finally, the woman became an object of suspicion and anxiety to the neighbors, and, with her daughter, she was sent to the asylum at Stockton. The child was not committed as an insane person, but because she could not very well be separated from the mother. I visited them soon after. The mother appeared to be absolutely helpless; she simply had no power, as though she had no legs to walk upon, and you could not convince her that she had any legs. This was her condition all the time she was in the asylum. Knowing that the child had no mental aberration, I was anxious to get her away from there, and I found a person in San Francisco that would take her. Her mother's influence was, of course, overwhelming, and I desired to get her out of that influence. She went to San Francisco and made friends, as she was a very interesting girl, yet she was totally helpless in the way of doing anything. She was able to sketch and paint some little things; of course, they were valueless, but it showed the refined ability to do something. Finally, a lady, who became interested in her, secured a place for her in a fur store, and she soon developed a wonderful capacity in that trade. She led all the other attendants, and made many improvements on what others had done. The proprietors told me she made some discoveries of great value, but she would not impart them to anybody, for fear of being robbed of their value. She was soon earning good wages, more than many of the others received, and in a short time took her mother home with her to San Francisco, and is to-day supporting her by working at this fur store, where she gets large wages. Now, the question is, what was the matter? My view of the case is different from many others. I do not know if the doctor is exactly right; it may be the proper explanation, but it occurs to me there is a great deal to be studied and learned from those cases.

DR. HOISHOLT, of Stockton: I searched the register of the asylum very carefully, and I am sure that I got all the cases that were there. Aside from this, I have seen Dr. Shurtleff, who was there a great many years, and I have talked with attendants. This form of insanity does not mean hereditary insanity. A father and son may become insane at the same time, perhaps, but still that would not be a case of induced insanity. It is only induced when the two present identical symptoms of insanity, from some form of psychosis. You may find that a great many other causes were at work. If so, very often this would give rise to different forms. One might be a form of mania, and the other melancholia. In that case it is not induced insanity, and its cause must be something else than the association. Dr. McFarlane's remark about the relationship of twins, I think is quite apt. There is a relationship in twins that is not found in children born at different times. While I do not believe in maternal impressions, still the influence at the time of conception and until the children are born must be about the same. In this one instance that I shall mention, it is quite remarkable. There were two boys, twins, both of them school teachers, going to the asylum, both of them with their throats cut, and, as it was learned afterward, one gave the reason why his throat was cut, and the other felt the same way, and cut it for the same reason. The patients looked alike, so much so that their brother could not tell them apart afterwards. This occurred a number of years ago; they came from a mountain town; their throats had been sewed up, and as the Secretary described it to me, it was almost ludicrous to see them, when spoken to, answer at the same time, the voice coming out in the opening of the throat. I am indebted to Dr. Shurtleff for a great many of the facts in connection with these cases of insanity.

Fibro-myoma of Uterus.—C. B. NICHOLS, of Sacramento, exhibited a uterus, tubes, and ovaries, recently removed from a patient, which illustrated, as he said, every variety of fibro-myoma of the uterus. The patient had come from another State, not for advice, but with her mind made up that she wanted an operation. There were a great many things which contraindicated an operation in her case. She was a bad subject, and the result was that she died of shock 24 hours after extirpation of the uterus. She was a large woman, weighing about 200 pounds; the abdominal wall was about 6 inches thick; she had asthma and a softened heart, such as very frequently accompanies fibroid tumors. The tumor involves the whole body of the uterus It is nodular. You will find all varieties of fibroids, submucous, interstitial, sub-serous, and the pedunculated. The question of operation in this disease has been discussed. There are some ways in which it can be treated to render the patient comfortable, and they will go on with a very useful life. In this particular case the woman was an invalid. She had ceased to be a comfort to herself or anybody else. She was unable, a great portion of the time, to be up. There was chronic peritonitis, a great deal of pain down the right leg, so much so that the leg could neither be flexed nor straightened fully without causing her a great deal of suffering. There was very little hemorrhage, her periods lasting about ten days usually, with not a very profuse flow. She was advised to have an operation about four years ago. She had put it off with the hope of recovering her health or getting so that she could pass her time comfortably, but she continually grew worse until life became a burden to her. She said that she had been advised to have electricity, and had tried it for a short time, and got no better, and gave it up. To what extent it was used I don't know, nor how thoroughly the gentleman applying it understood the matter.

Diseases of the Rectum in Women, with Especial Reference to the Treatment of Hemorrhoids.—W. A. BRIGGS, of Sacramento, read a paper upon this subject. The speaker said the rectum is oftener diseased in women than in men, and the causes of this preponderance are not far to seek. They inhere mainly in the structure, functions, diseases, habits, and customs occurring either only or predominantly in women. The structures of the pelvis and perineum, even in normal conditions, afford less efficient support to the rectum. The functions of menstruation and pregnancy are important factors in the causation of rectal disease. Diseases of the female pelvic organs predispose to rectal disease. The habit of constipation is more prevalent in women. The custom of lacing and supporting heavy skirts about the waist impairs the functions of all the abdominal viscera. In considering the anatomical conditions predisposing to hemorrhoids, it is a fact that there are no valves in the inferior vena cava, nor in the hemorrhoidal veins, leaving the column of blood between the heart and the rectum unsupported. This condition, when increased by any obstruction in the abdominal veins, naturally predisposes to the formation of piles. The causative factors may be summarized as a diminution of the forces that normally moved the venous blood from the rectum to the heart; obstruction of the venous outflow from the rectum; predisposition. Prophylaxis would therefore include the correction of any abnormal condition of the abdominal or thoracic viscera, as well as maintenance of intestinal peristalsis. The treatment of piles may be either medical or surgical; the medical consisting in the removal of predisposing causes, as well as in the relief of symptoms. The surgical methods of dealing with hemorrhoids would seem not to have kept pace with the general advancement of surgery. The ligature and cautery remain the methods most in favor and without strict antisepsis. Either of these means leaves a sloughing surface to heal by granulation, which may be averted largely by strict antisepsis and clean excision, with subsequent suture. The author then described his method of operation, which consists in excision of the pile and the subsequent tying of sutures that had been passed previous to the excision. Careful cleansing of the bowel before and after the operation was insisted upon as essential to the success of this procedure. In conclusion, he said: "I have been thus minute and specific in describing the various steps of this simple operation, because I have reason to believe that physicians generally regard the rectum as incorrigibly unclean, and therefore make no effort whatever, or at most, a purely perfunctory effort, to cleanse and disinfect it."

Dr. C. W. Nutting, of Etna Mills: The causes mentioned by the doctor as leading to a hemorrhoidal condition exist in women, perhaps, more particularly than in men, but we have hemorrhoids in men also. I think you will all agree with him in those causes and in the necessity of getting rid of them. His suggestion as to the operation in hemorrhoids, presented something new to my mind. I do not believe I ever saw it described in exactly the way he presented it. We all know of the operation introduced by Whitehead, where he entirely removed the hemorrhoidal tissue, making a circular incision above and below, and then bringing the two surfaces together by suture. He cuts through the entire mucous membrane of the rectum below the hemorrhoids, and then above, making a circular incision, dissects off the tissue, and then brings the two surfaces together. In my operations I have never gone to the extent of the author in the attempt to get antisepsis. I have always realized that it is necessary, so far as we can do so, to procure the conditions essential to the clean healing of wounds. I think his suggestion in that respect is a good one. My operations for hemorrhoids have always been conducted on the old plan; that is, I have depended altogether on the ligature. I have been somewhat afraid to try clamping and cautery, because I feared somewhat that I might have hemorrhage. I have always felt a good deal safer with a well applied silk ligature. So far I have never had any trouble that I could attribute to septic conditions following the operation as it is ordinarily performed, and I imagine that it would be pretty hard to get the rectum in a perfectly aseptic condition, even carrying out all the procedure described by the author.

Dr. T. W. Huntington, of Sacramento: I want to add a word of commendation for the very exhaustive manner in which this subject has been treated; a subject which is of extreme importance, as being one of the most frequent causes for resort to surgical measures that we meet in daily practice. I cannot other than commend his suggestions as to securing an aseptic condition of the lower portion of the rectum and the external parts. I confess, in my work heretofore, I have not been as explicit as he has suggested, and I believe that I have seen unfortunate circumstances arise as a result of that fact. For the past five years, I have always carried out a very rigid system of cleanliness after the operation. I am not altogether certain that preliminary measures will afford all the security that they seem to, from the fact that we are constantly liable to get leakage. It is, however, a step in the right direction anyhow, and I shall hereafter be as careful as he suggests. With regard to the treatment of hemorrhoids, I have done the operation which the author has suggested, which I recognize as practically that of Whitehead. The author does not concede that point, and probably he is technically correct; but, nevertheless, it is the operation which Whitehead has suggested—excision of the pile, bringing down the margin of the mucous membrane, and stitching it to the skin. I have done that operation once, and was satisfied with it, and the result was satisfactory to the patient. I have been led to question the propriety of the operation by others who have resorted to it, from the fact that now and then, either from lack of precautions prior to the operation, or from something that occurred during the progress of the case, stitches have separated or torn out, the parts have separated, and a very broad granulating surface has occurred, which very frequently would result in stricture of the anus, a condition which is extremely unfortunate. The greater portion of my work in this direction has been done by the Guérin suture; it is an old method, and one that has been resorted to very often in this city, having been done many times by the late Dr. Nelson, and which has given to me and to the patients with whom I have dealt, extreme satisfaction. It is a continuous ligature—and I wish to say right here that I believe where you have any formidable hemorrhoidal condition existing in these cases, that a continuous operation, encircling the entire anus, is essential to success. The Guérin method contemplates that step, and it is simply passing the ligature in at one point, then bringing the curved needle out, and carrying it in again, all the time with the same thread, and so going all round, encircling the entire anus. I believe experience generally will substantiate the statement that a continuous operation is, in the vast majority of cases, entirely essential.

DR. R. F. ROONEY, of Auburn: I have operated for piles a number of times, and always by the method which Dr. Huntington has suggested, the method of continuous suture. I have seen them operated on, where the pile was taken out by the clamp, and isolated here and there, and I have always seen them return. But by the Guérin method I have yet to see a relapse. I am afraid that if Dr. Briggs follows out the plan which he speaks of, he will have to be tinkering at those hemorrhoids in the future a number of times.

DR. BRIGGS, of Sacramento: The operation which I have proposed seems to be somewhat different from Whitehead's. His consists, as I understand it, of the excision of the pile, beginning at the junction of mucous membrane and skin, and extending upward and removing it. It is the same operation which he proposes for prolapsus, although of a minor degree. In extreme cases, he will get the same result that Dr. Rooney speaks of as getting by the continuous ligature, because they both encircle the rectum. They remove all the pile-bearing tissue. It seems to me that that operation is unnecessarily severe, and that of Whitehead has been pronounced so, I think, by surgeons generally. The continuous ligature is not always necessary, and is frequently unnecessary. My experience is different from that of the gentleman who spoke, because I have not had to operate on these cases a second time. I do not remember a single case in which I have had to operate a second time, by this or by the single ligature. I believe that, ordinarily, if the diseased tissue is removed, and afterwards proper hygienic conditions are maintained, piles will not be likely to recur; that is, if the causes which produce piles are obviated. The operation, it seems to me, possesses the advantage over that of Whitehead, in being entirely bloodless You can grasp the face of the pile with a narrow clamp, and you can insert your needles and suture. Frequently you will not lose a drop of blood, except that which is already contained in the pile.

Quacks.—This paper, in the absence of its author, J. R. TODD, of Gridley, was read by the Secretary. After giving Webster's definition of a quack, he said: Even if a man is competent to practise medicine, if he is guilty of irregularities and resorts to illegitimate means, we denounce him as a quack. This individual may have started out in life with good prospects, but he soon attains the limit of his growth, and, subsequently, instead of progressing, retrogrades. He does not attend medical societies, nor study, and never takes a medical journal, thinking "that they do a doctor more harm than good." "Billious attacks" and "malaria" are the favorite diseases of this man; all other affections he conveniently divides into "lung trouble," "kidney disease" and "liver complaint." For the first, he gives compound syrup of squills; for the second, sweet spirits of nitre, and for the third, calomel or nothing, according to the school he represents. This fellow sits by the bedside of a parturient female for four or five days, in cases of obstructed labor, from any cause, because he "believes in letting nature take its course," and suffers women to die from *post partem* hemorrhage, because he does not believe in "meddlesome midwifery." He is a good collector, and he takes cows, calves, second-hand furniture, whetstones and tallow for his pay, and turns it over to the best advantage, without ever discovering that nature cut him out and fitted him for a junk dealer. The "smart pretender" is a different man from the foregoing. If you will believe him, there is nothing that he does not know. He has specifics for everything, and actually cures people, no matter what the disease. He gets through college cheaply, practises medicine cheaply, and is, altogether, a cheap man. He obtains practice by sending word to the sick that he can cure their case, and has cured many like it; and he often makes his diagnosis at long range, without having seen the case or even having heard much about it. In conclusion, the speaker said he regretted that physicians in good standing sometimes consult with this man, and in a particular instance, with which he was familiar in his own locality, even members of this Society had done so. This action was to be greatly deplored, as it gave the charlatan a standing in the community which he would never otherwise attain.

Quacks and Humbugs.—C. H. GIBBONS, of Arbuckle, read a paper upon this subject. He said: Mankind, as regards occupation, were naturally divided into three classes: agricuture, manufacturers, and commerce. As the needs of the people were satisfied, and as their prosperity and infirmities increased, a demand was made for the satisfaction of wants. These wants were supplied by the so-called learned professions, as well as by artists in their several branches. It was necessary for the professions to stand on a higher plane than those occupations which simply provided for food and raiment, yet in the ranks of the profession there were the great and small, though ultimately here, as elsewhere, men found their level. In the medical profession there was a better opportunity to practise rascality, with less danger of detection, than in any other calling. The ignorant pretender and the educated charlatan, infested every community, moving from place to place as the field, from a pecuniary standpoint, became exhausted. The speaker then cited examples of the methods of the quacks, and said that the money they accumulated from charges, invariably in advance, seriously affected the incomes of the profession. Occasionally, he regretted to say, that, for the sake of a few dollars, some members of the profession consorted with notorious quacks. Such a course did more injury to the cause of medicine than all the flaming advertisements of fakirs in medicine. As illustrating the opinion of the public regarding nostrums, the speaker mentioned a little incident that happened in Lake county, several years ago. He said: "One of Sacramento's most honored physicians stopped at a hotel in Lake county; his personal manners won the good will of the mountaineers, and learning his name and occupation, they amazed their less fortunate neighbors by declaring they had talked with the man who made the liver regulator.

DR. G. L. SIMMONS, of Sacramento, in opening the discussion, said: The history of quackery, as has been stated by some author, is the history of the credulity of mankind. I have for many years believed that the profession could so enlighten the public, by the publication of the knowledge that they profess, as to almost entirely do away with it. Of what use is it for us, in medical societies and in our offices, to talk of tricky methods and of dishonest practices, if that knowledge is not disseminated where it will do the most good. I see no reason why a body of men like this could not so organize themselves as to make a general work of holding up the practices of those who follow dishonest medication. In another place I referred to this matter, and I believe the State Society have, by resolution, a plan by which we can, to a certain extent, enlighten the public in this matter. The same doctor, about whom Dr. Gibbons has told an amusing story, some years ago started a small private hospital, of fifteen or twenty rooms, in this city, for his own use and the use of physicians who cared to put their patients there. He employed a well-known nurse, a woman of more than average intelligence, as matron. On going there a few weeks after the place was started, he was astonished to find on every door a placard recommending, in the highest terms, the same liver regulator spoken of by the author. On being remonstrated with, the answer was: "Why, it will help you, won't it?" Evidently, the woman did it with a pure motive, but entirely ignorant of the true position of the relation of the profession to quack medication. In relation to what are known as patent medicines, I believe it is the mystery and secrecy that are supposed to surround the preparation of these things that makes them popular. In Europe, in several localities, the law requires that any preparation for the sick shall have printed upon the label the ingredients contained in the bottle. It has been stated to me that a celebrated kidney cure has lost a very large percentage of its sales and its influence by an analysis that was published of it, where it was recognized as being principally composed of saltpetre. If a man, with his dollar and a half, who goes to buy that kidney cure, knows that it contains about six cents worth of nitrate of potash, he is very apt to stop his purchase. It no longer has that influence upon his mind that the secret preparation would have. I believe it would be so with all that class of quack medicines. If we could get a law through the legislature, requiring that anything sold in this State have, upon its label, its composition, I think it would tend to elevate regular medicine. Now, I want to say one word about the first paper. I do not know but that I am the individual referred to in it; I rather think I am. It has come upon me as a revelation, since hearing it, and I want to make an explanation. It is like a great many other things concerning professional recognition and professional relations, and when we get things second-hand they are not always true. I had a patient that, for her health, went to a neighboring town. She was about 85 or 86 years of age. There was very little to be done for her. After she had been there a week, I got word that she had a fever, and that it was very necessary for me to go. I do not go very often in the country now-a-days; I have given it up; but on account of an old friendship and a peculiar relation of doctor and patient for thirty years, I did go, upon the second call. At the depot I found someone awaiting me that I had never seen before, and rode to the house where the patient was. I found her in an insensible condition; in fact, she died a few hours afterwards, unable to say anything; and alone at the bedside, with a gentleman who had taken me there, was a physician. On inquiry, I found that that gentleman had a certificate from the State Board of Medical Examiners. After finding that out, I went into his house, and going in the gateway, was surprised at a certain kind of a sign, in regard to "Cure for Dipsomania," or "Cure for Drunkenness," or something of that kind. At any rate, it looked quite unprofessional, and the moment I got inside I asked the party what that was for, if he was interested in it. It is unnecessary to say what happened further, but the fact was, that he was pursuing irregular practices, and I lectured him upon the subject of a member who had received recognition by the profession following that sort of business. I say this because I believe the author of that paper, upon an incident of that sort, might do an injustice.

THE PRESIDENT, H. D. LAWHEAD, of Woodland: Not long ago I had a similar experience; I was perfectly innocent of the situation until after it had all passed. While, of course, we want to look after these things and be very careful not to allow things of that kind to happen, there is such a disposition on the part of matters that involve professional men, and especially physicians, to grow by repetition, that I think those relating them should be extremely careful.

DR. GIBBONS, of College City: My object in writing the paper was to bring prominently before the profession the harm that is done to the profession by consultation with and recognition of irregular practitioners. The paper was not written with the object of hurting anybody's feelings, but we meet here for mutual improvement, as members of the profession.

Points in the Pathology, Diagnosis, and Surgical Treatment of Appendicitis.—A paper entitled "Some Points in the Pathology, Diagnosis, and Treatment of Appendicitis," was read by T. W. HUNTINGTON, of Sacramento. The reader took an advanced position with regard to the surgical treatment of this disease, advocating a conservatism of a higher type which challenges empiricism, while admitting the authority of experience. After a brief discussion of the pathology and etiology of the disease, attention was called to some of the unusual symptoms, such as pain, referable to parts remote from the appendix; persistent vomiting; constipation, persistent and obstinate; peculiar gait in walking. With regard to the presence or absence of fever, the author stated that in the chronic recurrent type there is no rule governing this feature. This also may be alleged with regard to the recurrence of a rigor early in the history of an attack. Emphasis was laid upon the point that the absence of a recognized chill is no guarantee against the presence of a pus sac. The position was taken that not more than half of all cases are operable. With regard to the chronic recurrent attacks resulting in permanent invalidism on the part o the patient, the reader insisted that operative treatment should be resorted to, not only as a life-saving, but as a comfort-giving proposition. A case illustrating this point point was read and this comment added: "I am, by no means, prepared to say that the patient's life was in immediate danger, nor do I wish to debate the question wherein skilful medical treatment might have averted the operation entirely, after a protracted period of invalidism. I do, however, urge that this man's prospect for a safe and quick return to health, was through the medium of an operation, skilfully done, during the quiescent period." The *technique* of the operation was briefly alluded to, special importance being attributed to what is known as McBurney's incision. The importance of early and bold proceedings in the fulminating variety of appendicitis, was dwelt upon at length, and the paper closed with some comments on the treatment of appendicular abscess.

DR. THOMAS ROSS, of Sacramento, in opening the discussion, said: Appendicitis is an interesting subject, and one that is, perhaps, eliciting more attention than any other surgical procedure within the last four or five years. The appendix veriformis is a peculiar structure. It has a very low organization, being supplied with blood by one small blood vessel, and therefore it is liable to inflammation and degeneration. During the past five years there has been quite a contest between physicians and surgeons, on the subject of appendicitis. I remember, two years ago, at a meeting of the Sacramento Society for Medical Improvement, hearing a paper by Dr. Huntington, with notes of cases on appendicitis. I, at that time, thought that many of those cases would recover without operation. I had 4 or 5 cases prior to that, of what we diagnosed as typhlitis, and they recovered under medical treatment, and on that account I was incredulous as regards the necessity for surgical interference in those cases. But since then I have seen a number of cases of appendicitis; I know more about the disease, and have read more of the literature on the subject, and I have a better appreciation of the great danger of the disease, and the almost impossibility of stating, after forming the diagnosis of appendicitis, whether the case is going to be a mild one, or whether it is going on to gangrene with septic infection and general peritonitis, or to the formation of abscess. I think that is the principal reason why, in any severe case, radical surgical interference is necessary. I believe now, with most physicians, that appendicitis is a surgical disease, and that those cases that I had, that happened to get well without surgical interference, were probably mild in type, the inflammatory action was not severe; abscess, or gangrene, or strangulation, or other results liable to happen, did not supervene, and resolution took place. But we cannot depend upon resolution taking place. In some cases, where the disease has gone too far, it is impossible. If we had any positive means of telling the exact pathological condition of the tissues of the particular patient before us, suffering from appendicitis, we might probably temporize and trust to medical treatment; but I believe it is an impossibility to tell the exact pathological condition of a given case, and therefore I think that operative interference is generally required. We have no remedies in medicine to prevent septic infection. We have no remedies that have any curative influence on septic infection when it occurs. Therefore, in many severe cases, very little can be done by the physician, except to relieve pain. As to treatment, I have nothing to add to what Dr. Huntington has said. I will mention, however, that Dr. White had a case not long ago, in which he operated for appendicitis, and in the appendix he found a foreign body. It looked like, and I believe was, a small berry seed. The appendix was indurated, thickened, and hardened by previous inflammation.

DR. C. H. GIBBONS, of Arbuckle: I remember a case which I had more than a dozen years ago, before appendicitis was invented. It was typhlitis then, or at least my case was. It became very violent. The subject was a boy of about 14 years. The inflammation was very severe; I think the temperature was 106.5° F., and the patient was sinking. We did not think it was worth while to operate, but as a last resort we commenced giving 10-grain doses of opium every hour, until we had given seven doses, and there were no signs of opium poisoning; the patient got well. We gave that boy something over 100 grains of opium inside of 24 hours. Of course it was heroic treatment, but it succeeded.

DR. A. W. HOISHOLT, of Stockton: Physiologists have learned very little about the veriform appendix, but there is one thing they have learned in regard to the structure of it, namely, that the mucous membrane in the appendix has very many lymphatics; they are more numerous there than in any part of the intestinal tract. Consequently, absorption will take place in the appendix much more rapidly than anywhere in the intestinal tract, and will account for concretions forming, and that would, perhaps, make it still more probable that that is the usual, though not the sole, cause of appendicitis.

DR. W. E. BATES, of Davisville: I believe the latest opinion about the origin of the appendix is, that man in earlier ages was used to coarse foods, in large quantities, and therefore he required a large colon to hold the mass. But in our age of refinement, when we have our foods more concentrated, we use less, and therefore need a smaller colon, and the appendix is a shrunken-away portion of the colon. I have had about five cases of appendicitis in the last ten years, and I have not operated on a single one. They have all gotten well. My diagnosis has been concurred in by others. I have one boy who has had seven recurrent attacks, usually from six months to a year apart. I wanted him to allow me to operate during the last attack, and he says if he has another he will allow me to do so. He has now gone a year and a half without an attack. I consider this case of a catarrhal nature, resulting from a catarrh of the bowels, and I have treated that. I think he is very liable to go without appendicitis for the rest of his life, or probably for some time at least. Russell, who has operated upon some 180 cases, in his last report, stated that he is becoming more inclined to the idea that a vast majority of his cases would get well without operation, but the trouble is, we don't know which one is going to get well and which is going to be bad, and it seems to me really the safest way to operate.

DR. A. T. HUDSON, of Stockton: In 1858 I had a clear case of appendicitis, a man 40 years old, taken first with a slight diarrhea or dysentery. This soon stopped and there was no movement. Pain and redness, right over the spot; then occurred and continued. Nothing would relieve him. In about six days he died. On *post-mortem* examination, I found the appendix had ulcerated, and a limy concretion, an inch and a quarter long and three-quarters of an inch wide, had extruded. That was clearly an operable case.

DR. HUNTINGTON, of Sacramento, in replying, said: I have time and again read that the appendix is not well supplied with blood. Curiously enough, my experience has taught me that there is a large amount of blood supplied to that organ, the handling of which causes a serious complication during the operation. If any one thinks that it does not bleed, let him be foolish enough once to strip it off without tying the vessels as he goes along. I have had one such experience, and I certainly shall not be caught again. I am now careful to tie the vessels of the appendix quite as thoroughly as any other portion of the body that is liable to bleed. I want to say one word more, in support of the operation upon those patients who have had frequent recurrences, and whose lives are rendered miserable by the condititíon under which they are laboring. A brief allusion to a case will cover the ground very nicely. A patient, upon whom I operated, was a housewife, the mother of two children, the wife of a miner. For nearly a year he had been obliged to remain at home to care for the little ones and do the 'work about the house and care for a sick wife, on account of a constant tenderness and soreness over this region. I believe there can be no discussion about the propriety of proceeding to operate in such a case as that, whether the patient will live or die, does not matter at all. I would advise an operation, and urge it if necessary, and would believe I was taking the only rational course in such a case. I believe, with Dr. Bates, that after a patient has had three, or four, or five, or six attacks, that the time has come for interference, and the surgeon or the physician who advises to the contrary is assuming a very grave responsibility.

Secretary's Report.—The Secretary, E. E. STONE, of Marysville, submitted his annual report. He said the Society had been organized a little less than five years, during which time the membership had had a steady growth. There were now sixty-two active members on the roll of the Society.

Treasurer's Report.—The report of the Treasurer, O. STANSBURY, of Chico, showed that the Society had received, during the year, $127.00. Balance on hand from last report, $50.85; disbursements, $171.70; leaving a balance on hand of $6.15.

Place of Next Meeting.—John Fife, of Red Bluff, presented an invitation to the Society to hold its next meeting in that city. On motion, the invitation was unanimously accepted.

Election of Officers.—The Society then proceeded to the election of officers, with the following result:

President	A. W. Hoisholt.
First Vice-President	Thomas Ross.
Second Vice-President	B. M. Gill.
Third Vice-President	C. H. Gibbons.
Secretary	E. E. Stone.
Treasurer	O. Stansbury.
Board of Censors	W. E. Briggs, W. E. Bates, J. S. Cameron, E. B. Robertson, C. W. Nutting.

Dr. L. C. Lane.—J. H. Parkinson, of Sacramento, said: I desire to nominate, for honorary membership, one whom I honestly and sincerely believe has done more for our profession in California than any other man. I mean Dr. L. C. Lane, of San Francisco. I feel certain that this Society will feel honored in that selection and that no more creditable member of our profession can be placed upon our roll. He needs no commendation or eulogy at my hands. There were several seconds to the nomination, and Dr. Lane was then elected an honorary member by a rising vote.

Amendment to Constitution and By-laws.—J. H. Parkinson, of Sacramento, brought up an amendment to the Constitution and By-laws, in relation to honorary membership, which had been submitted at the Stockton meeting. The amendment provides, "Hereafter, any person proposed for honorary membership must, if a resident of this State, be eligible for active membership, except as regards the place of residence. The name of the person proposed shall be submitted to the Society and shall then be referred to a committee, which shall report at the next session, when the proposition will take the same course as in the election of active members." The amendment was unanimously adopted.

Installation of Officers.—The regular business of the meeting having been concluded, the retiring President, H. D. Lawhead, of Woodland, introduced the President, A. W. Hoisholt, of Stockton, whom he said had for some time been earnestly seeking the privilege of the floor, and he felt certain that the Society would now be pleased to listen to his speech. Dr. Hoisholt then said that his election had been so wholly unexpected and had been such a surprise to him that the speech suggested by Dr. Lawhead would not be forthcoming. It was true that he had several times endeavored to protest against his election to this office, but as the Society seemed determined that he should serve in this capacity, he could only say that he would make every possible effort to fulfil the duties of the office during his term.

New Members.—At the different sessions, the following were duly elected members of the Society:

W. H. Baldwin,
W. C. Baylor,
Stephen Cleary,
G. H. Flett,
E. W. Hanlon,
H. H. Look,
C. W. Nutting,
A. M. Stafford,
Barton J. Powell,
Fred D. Tyrrell,
C. D. Ware,
H. E. Wright.

REVIEWS AND NOTICES.

American Year Book of Medicine and Surgery.

Commencing in January next, Mr. W. B. Saunders, the well-known medical publisher of Philadelphia, will issue annually the American Year Book of Medicine and Surgery. The work will be edited by Dr. George M. Gould, who is familiar with the difficulties, trials and tribulations of the editorial chair, assisted by a corps of American physicians and teachers. It is proposed to review not only the contributions to American medical journals, but also those of the leading foreign medical journals, thus making the scope of the publication really international. Only that which is new will be included. The treatment of the subjects will be "synthetic and dogmatic," and condensation of the material by experts will be the rule. By this means, it is intended to keep the work within the limits of a single volume, and to present the matter to its readers before it is many months old. Liberal illustrations are promised, and these the publisher proposes to furnish from his own studio.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held October 1, 1895, the following were granted certificates to practise medicine in this State:

Henry William Cease, Snelling; Med. Dept. Vanderbilt Univ., Tenn., Mar. 26,'94.
George Kerr Edwards, Paso Robles; Med. Dept. Univ. Penn., May 6,'92.
John Joseph Flood, San Francisco; Med. Dept. Univ. Cal., July 13,'95.
Isaac Marion Harrison, Los Angeles; Med. Dept. Univ. Mich., July 1,'80.
Wm. G. Hay, San Francisco; Med. Dept. Univ. Cal., July 13,'95.
Thomas G. Heine, Los Angeles; Minnesota Hosp. Coll., Minn., Mar. 16,'88.
Edward Hood Julien, Yreka; Detroit Coll. of Med., Mich., Mar. 3,'95.
Henry Ruser, San Francisco; Ludwig Maximilian Univ. Bavaria, Feb. 21,'85.
George W. Leuschner, San Francisco; Mich. Coll. of Med. and Surg., Detroit, Mich., Mar. 15,'92.
Robert Samuel Martin, San Francisco; Rush Med. Coll. Ill., May 22,'95.
Reuben N. Mayfield. Denver, Colo., Long Island Coll. Hosp., N. Y., June 23,'80.
Clarence J. Miner, Fresno; Med. Dept. Univ. Minn., June 4,'91.
W. E. Poole, Yreka; Med. Dept Willamette Univ., Or., Mar. 26,'84.
William S. Porter, Oakland; Med. Dept. Univ. Penn., June 13,'95.
Wm. Todd, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Joseph Westmorland, Los Angeles; Royal Coll. Phys., Edinburgh, Scotland, April 26,'65; Royal Coll. Surg., England, Aug. 1,'66; Lic. Soc. Apothecaries, England, Dec. 6,'66.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific) from September 20, 1895, to October 20, 1895.

Leave of absence for thirty days is granted Major B. F. Pope, Surgeon. Par. 4, S.O. 118, Dept. of Cal., Oct. 4, 1895.

Leave of absence for one month, to take effect about November 10, 1895, with permission to apply to the Adjutant General of the army for an extension of one month, is granted 1st Lieutenant John S. Kulp, Assistant Surgeon. Par 3, S.O. 149, Dept. of the Columbia, Oct. 7, 1895.

1st Lieutenant William E. Purviance, Assistant Surgeon, having completed the duty required of him by general orders No. 12, c. s. these h. q., will return to his proper station. Par. 4, S.O. 151, Dept. of the Columbia, Oct. 9, 1895.

Lieutenant Colonel David L. Huntington, Deputy Surgeon General, detailed as a member of the examining board for examination of candidates for admission to the Medical Corps of the army, to meet at Washington October 1, 1895.

Major Alfred C. Girard, Surgeon, is ordered from Fort Sheridan, Ill., to Fort Douglas, Utah, for duty, relieving Major Charles L. Heizmann, Surgeon.

Major Heizmann, on being thus relieved, is ordered to Fort Adams, R. I., for duty.

Captain Richard W. Johnston, Assistant Surgeon, will be relieved from duty at Fort Huachuca, Arizona, upon the arrival there of Captain William J. Wakeman, Assistant Surgeon, and ordered to Fort Logan, Colo., for duty.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from September 20, 1895 to October 20, 1895.

Past Assistant Surgeon J. O. Cobb to proceed to Victoria, B.C., and Vancouver, Wash., on special temporary duty. Oct. 12, 1895.

ITEMS.

Dr. Elizabeth M. Yates has removed from 705 Sutter street, San Francisco, to Woodland, California.

Dr. Kate I. Howard has removed from 334 O'Farrell street to 1410 Larkin street, San Francisco, Cal.

Dr. Thomas F. Rumbold has removed from the Crocker Building, San Francisco, to the Union Trust Building, St. Louis, Mo., where he will practise in future.

Dr. H. W. Yemans, of San Francisco, is now visiting New York, where he will remain for several months. The doctor's address in that city will be 52 E. Twenty-third street.